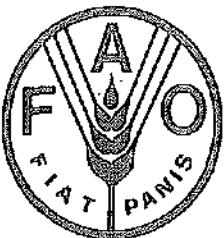


the
fourth



world food survey

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome 1977

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In some tables, the designation "developed" and "developing" economies is intended for statistical convenience and does not necessarily express a judgement about the stage reached by a particular country or area in the development process.

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Introduction

It is now fourteen years since the Third World Food Survey was issued by FAO in 1963. As such, publication of the Fourth World Food Survey, which should have followed within a decade of the previous one, may be said to be overdue. However, the document "Assessment of the World Food Situation" which was prepared for the World Food Conference in 1974 included much of the material, though in a more concise form, that would have formed the subject of this survey. Another FAO publication, Population, Food Supply and Agricultural Development, which appeared at about the same time, also covered much the same ground. The publication of the present number in the series was therefore held over for this year.

The scope of this survey is broadly similar to that of its predecessors. It makes an attempt to update the review of recent trends in food production and supply against the background of increasing population and most recent evidence regarding the incidence of under- and malnutrition. The synergism between malnutrition and disease is more evident now than before. This review is disquieting, while firm evidence of any significant progress being made since the World Food Conference in reducing the numbers affected by inadequate supplies of food is not yet available.

In some ways the present survey also charts a new course on what may be regarded as perilous waters. A deliberate innovation is the inclusion of a wealth of data at the country level. Estimates of the magnitude of the food problem are given for many individual countries. Since the Third World Food Survey many estimates of the total number of the "hungry" or the "malnourished" have been issued by several individuals and institutions. The present survey points toward the dangers of seizing on emotive words such as "hunger" and on numbers which are at best only crude estimates. Stress is laid instead on the absence of adequate data for quantification felt alike by statisticians and nutritionists. In this situation, it was felt that publication of such country data as are available in FAO, together with clear statements regarding their deficiencies and constraints, might help those interested in the study of the problem, and others, not only in improving upon the interpretation of existing data, but also in identifying and working toward filling the data gaps. To promote the improvement of the data base for the study of world food problems is, thus, one of the main objectives of this survey which, if achieved even through criticisms of interpretations of available data included here, would be a sufficient justification for its publication.

Part I of the survey contains a review of trends relating to food supplies since 1961. In Part II emphasis is laid on identification of vulnerable population groups. The important questions asked are "Who are the malnourished?" and "How can they be identified?" Estimates are then made of their total magnitude. Finally, the survey reviews methods of calculating the size of the "calorie deficit" and stresses the need to tackle the inequalities in food distribution as a necessary concomitant to increasing total world food supplies.

PART I

GROWTH OF FOOD AND AGRICULTURAL PRODUCTION AND FOOD SUPPLY

Section 1. Food Production and Population

Analysis of food production and population growth trends provides an indication of the progress mankind has achieved in the struggle to feed itself. Although the growth of world food production since the 1960s has been greater than that of population, the margin between the two, i.e. the growth of food production per caput, has been shrinking (Table I.1.1). In the developed countries as a whole, the increase in per caput food production remained at about 1.4% during the 1960s and 1970-76. In the developing countries, on the other hand, while through the 1960s the growth of total food production was at 3.1%, the increase in per caput food production was less than 1%. However, during the period 1970 to 1976 the growth rate of total food production slowed down to 2.7% and to only 0.3% on a per caput basis. Moreover, whereas population growth has been declining in the developed countries, it has remained more or less constant and at a much higher level in the developing countries. Thus, although food production has increased at a faster pace in the developing countries than in the developed ones during the 1960s and 1970s, the increase on a per caput basis has been consistently smaller. Indeed, during the early 1970s, the per caput increase in the developing countries has shrunk to an insignificant level. This has meant that the already large difference in the actual level of per caput food production between the two groups of countries has widened still further.

The long-term average annual growth rates do not reveal the inevitable short-term fluctuations in food production resulting in imbalances that, although temporary, can cause serious hardship. Figure 1 shows the annual index numbers of the total and per caput food production in the developed and developing countries during the period 1961-65 up to 1974. The troughs in the trends of per caput food production indicate the periods during which food production failed to match population growth. Because of widespread bad weather, the growth rate of food production in the developing countries in 1966 fell back; in fact, per caput food production fell to slightly below the 1961-65 average level in 1966. This was followed in the period 1967 to 1970 by an encouraging spurt in production, not only because of better weather, but also because of the rapid introduction of the high-yielding varieties of cereals and the associated "green revolution" technology, especially in the Far East. In 1971 and 1972 there was again widespread bad weather in the developing countries, coinciding in 1972 with bad weather in many developed countries as well, especially the USSR. It is estimated that in 1972, probably for the only time since the Second World War, world food production declined slightly in absolute terms from the previous years' level and not just in relation to population growth. There has been a significant recovery since 1973 particularly in 1975 and 1976 in the developing

Table I.1.1. Average annual rates of growth of food production in relation to population: world and regions,
1961-65 to 1970 and 1970 to 1976

Region	Population		Food production			
	1961 to 1970	1970 to 1976	Total 1961 to 1970	1970- 76	Per caput 1961 to 1970	1970- 76
..... Percent per annum						
Developed market economies	1.0	0.9	2.2	2.4	1.2	1.5
North America	1.2	0.9	1.9	3.1	0.7	2.1
Western Europe	0.7	0.6	2.3	1.6	1.6	1.0
Oceania	1.8	1.7	2.9	3.1	1.1	1.3
Other developed market economies	1.4	1.6	3.3	2.1	1.8	0.6
Eastern Europe and the USSR	1.0	0.9	2.9	1.9	1.9	1.0
All developed countries	1.0	0.9	2.4	2.3	1.4	1.4
Developing market economies	2.6	2.6	3.3	2.8	0.7	0.2
MSA ^{1/} countries	2.4	2.5	3.1	2.1	0.7	-0.4
Non-MSA countries	2.7	2.7	3.3	3.4	0.6	0.7
Africa	2.5	2.7	2.7	1.2	0.1	-1.4
Latin America	2.7	2.8	3.5	3.3	0.8	0.5
Near East	2.7	2.8	3.0	4.2	0.3	1.4
Far East	2.5	2.5	3.5	2.8	0.9	0.2
Other developing market economies	2.5	2.5	2.1	1.5	-0.4	-1.0
Asian centrally planned economies	1.8	1.7	2.7	2.4	0.9	0.6
All developing countries	2.3	2.3	3.1	2.7	0.7	0.3
World	1.9	1.9	2.7	2.4	0.8	0.5

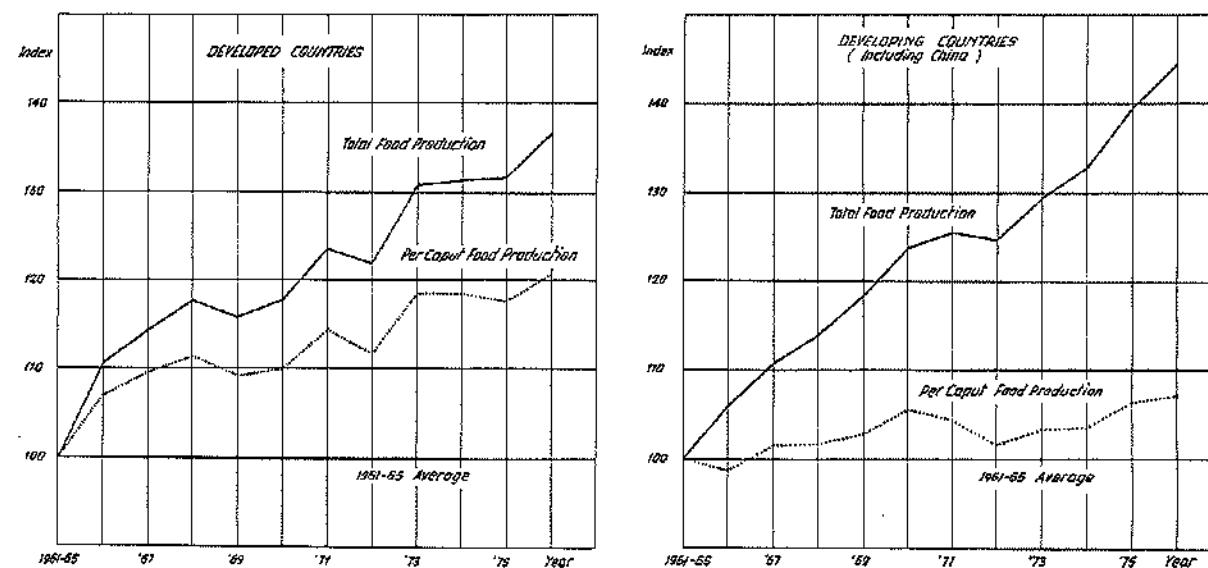
1/ MSA - most seriously affected

countries. In the developed countries, the 1970s have seen a rather erratic progress.

Another aspect of the same problem relates to the increasing disparities in growth of food production among the special problem groups of developing countries. For instance, developing countries which were most seriously affected (MSA)^{1/} by the recent economic crisis (including most of the least developed

^{1/} A list of these countries is shown in Appendix A.

Figure 1 - TOTAL AND PER CAPUT FOOD PRODUCTION IN DEVELOPED AND DEVELOPING COUNTRIES, 1961-65 TO 1976



among developing countries (LDCs) and food-priority countries) which account for about 56% of the total population of the developing market economies, have failed to do as well as the rest of these countries (Table I.1.1). The margin between rates of production increases in the MSAs and those in the other developing market economies has widened considerably since the 1960s. In the MSA countries, the annual growth in food production declined from 3.2% in 1961-70 to only 2.1% in 1970-76, with the result that per caput food production decreased annually by 0.4%. In the non-MSA developing market economies, the rate of growth of total and per caput food production improved slightly.

The problem faced by the developing countries in general and the MSA countries in particular is further emphasized if the trends are reviewed in individual regions. During the 1960s, food production grew faster than population in all regions with the exception of the residual group called Other Developing Market Economies, mainly comprising small South Pacific Islands. In the early 1970s, the only developing region that managed to accelerate food production growth rates was the Near East. In all other developing regions food production growth rates fell back from the levels achieved during the 1960s.

It was in Africa and the Far East that the decline in food production growth rates was most serious: Africa fell back from 2.7 to 1.2% and the Far East from 3.5 to 2.8%. The consequence in Africa is that in recent years per caput food production has declined - a new and most serious phenomenon.

Disaggregating the data further, the serious deterioration of certain developing countries is highlighted. Country data on the growth of population and food, cereal and agricultural production are shown in Appendix B.

During the 1960s, 56 out of 128 developing countries experienced population growth rates higher than food production growth rates, with the consequence that their per caput food production declined. During the 1970s, the number of developing countries in this predicament not only rose to 69, but these countries now include highly populated countries such as India, Pakistan, Mexico and Egypt.

Of all the major food groups, cereals assume great importance, especially for developing regions, since, as will be shown later, cereals account for over one half of total energy supplies of food. Moreover, the sharp fluctuations during the early 1970s in the world food situation and world food security in particular, were caused mainly by changes in production of this basic group of commodities.

Although growth rates of total and per caput cereal production (Table I.1.2) differed from those for food, their patterns of changes were generally similar in all regions. Certain differences worthy of comment are as follows: In the MSA countries, in particular, growth rates of cereal production declined from 3.9% per annum in the 1960s to only 2.0% per annum during 1970-76. In the non-MSA developing countries on the other hand, there was a substantial

rise from 3.4 to 4.0% per annum in the same period. In the Near East the growth rate of cereals was much lower than that of total food, and lagged behind population growth rates during the period 1961-65 to 1970. But the position was reversed during the 1970s with cereal production rising to 5.0% per annum. In the Far East the situation was the opposite. Cereal production there increased faster than food production in the first period due mainly to the introduction of high-yielding varieties, but the rate of increase slowed down substantially during the second period.

Table I.1.2. Average annual rates of growth of cereal production in relation to population: world and regions, 1961-65 to 1970 and 1970-76

Region	Population		Cereal production			
			Total		Per caput	
	1961-65 to 1970	1970- 76	1961-65 to 1970	1970- 76	1961-65 to 1970	1970- 76
..... Percent per annum						
Developed market economies	1.0	0.9	2.1	3.0	1.1	2.1
North America	1.2	0.9	1.9	4.1	0.7	3.2
Western Europe	0.7	0.6	2.8	1.3	2.1	0.7
Oceania	1.8	1.7	3.1	6.5	1.2	4.7
Other developed market economies	1.4	1.6	0.4	0.9	-1.0	-0.7
Eastern Europe and the USSR	1.0	0.9	4.1	1.6	3.1	0.7
All developed countries	1.0	0.9	2.8	2.5	1.8	1.6
Developing market economies	2.6	2.6	3.7	3.0	1.1	0.3
MSA countries	2.4	2.5	3.9	2.0	1.4	-0.4
Non-MSA countries	2.7	2.7	3.4	4.0	0.7	1.3
Africa	2.5	2.7	2.9	1.9	0.4	-0.8
Latin America	2.7	2.8	3.5	3.8	0.7	1.0
Near East	2.7	2.8	2.0	5.0	-0.6	2.1
Far East	2.5	2.5	4.2	2.5	1.6	0.0
Other developing market economies	2.5	2.5	4.3	2.3	1.7	-0.2
Asian centrally planned economies	1.8	1.7	2.9	2.5	1.1	0.7
All developing countries	2.3	2.3	3.4	2.8	1.1	0.4
World	1.9	1.9	3.1	2.7	1.2	0.7

The year-to-year changes in cereal production during 1963-76 are shown for the developed and developing countries in Figure 2, along with the corresponding trends^{2/} in consumption as human food and animal feed. It is evident that the pattern of annual fluctuations in these trends is similar to that shown for total food in Figure 1. It can be seen from the graphs that the margin between cereal production and its consumption as human food in the developed countries was large and increased from 331 million tons in 1961 to 544 million tons in 1974. In the developing countries, the corresponding figure was only 85 million tons in 1961 and rose to 108 million tons by 1974. This is because in the developed countries a larger and increasing share of cereal production is used as feed, the excess of feed over food use increasing from 94 million tons in 1961 to 242 million tons in 1974. In the developing countries, the feed component is much lower than that of consumption as human food. The total amount of 45 million tons used as feed in 1961 rose only to about 78 million tons by 1974. On the other hand, the total amount of cereals used as human food in all developing countries was only 37 million tons more than the amount of 480 million tons of cereal used as animal feed in the world.

Data relating to the use of cereals as food and animal feed for the world and the various regions for 1961-63, 1969-71 and 1972-74 are presented in Table I.1.3. It shows that in the developed countries as a whole, the share of feed in cereal utilization (food and feed) rose from 62% in the early 1960s to reach 72% in 1972-74. In North America this share, which was already the highest in the world, rose further to 88%. More significant was the change in eastern Europe and the USSR where the feed use of cereals rose from less than 50% in the early 1960s to 67% by 1972-74. In the developing world, except in Latin America where animal feed is a major component of cereal utilization, the percentage of cereals utilized as animal feed has been historically very much lower (around 12%) and has not shown much increase to date.

^{2/} Data for these trends are available only up to 1974.

Figure 2 - CEREALS : PRODUCTION, FOOD AND FEED USE
(In million metric tons)

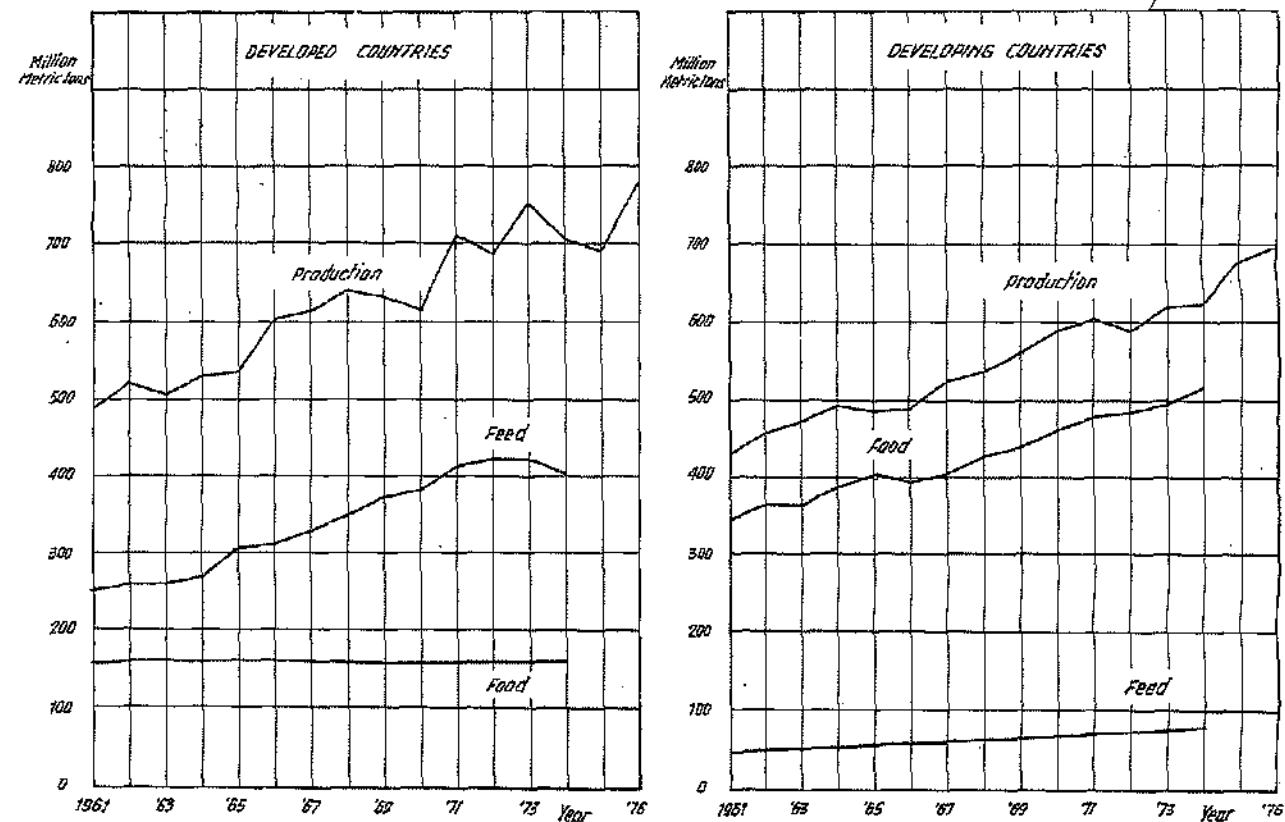


Table I.1.3. Use of cereals as food and feed: world and regions,
1961-63, 1969-71 and 1972-74

Region	Food			Feed			Share of feed in consumption (food and feed)		
	1961-63	1969-71	1972-74	1961-63	1969-71	1972-74	1961-63	1969-71	1972-74
..... Million metric tons .....									..... Percent
Developed market economies	90.1	89.6	90.8	197.3	265.4	272.2	69	75	75
North America	19.2	20.2	20.6	120.2	164.7	149.0	86	88	88
Western Europe	45.4	43.4	43.4	69.3	93.8	103.9	60	68	71
Oceania	1.5	1.6	1.8	1.9	3.3	2.8	56	57	61
Other developed market economies	24.0	24.4	25.0	5.9	13.6	16.5	20	36	40
Eastern Europe and the USSR	68.9	69.7	69.4	60.0	124.2	143.9	47	64	67
All developed countries	159.0	159.3	160.2	257.3	389.6	416.1	62	71	72
Developing market economies	226.6	289.3	312.9	24.1	36.0	41.4	10	11	12
Africa	28.4	36.2	39.0	1.3	2.0	2.2	4	5	5
Latin America	27.7	35.3	39.7	13.0	21.7	26.1	32	38	40
Near East	24.9	31.2	34.1	7.2	8.6	8.8	22	22	21
Far East	145.5	186.4	199.9	2.6	3.7	4.3	2	2	2
Other developing market economies	0.1	0.2	0.2	-	-	-	-	-	-
Asian centrally planned economies	131.6	171.1	185.6	23.2	30.9	33.4	15	15	15
All developing countries	359.2	460.4	498.5	47.3	66.9	74.8	12	13	13
World	517.2	619.7	658.7	304.6	456.5	490.9	37	42	43

Section 2. Agricultural Production and Agricultural Population

Domestic agricultural production is the main source of food supplies in most developing countries. Changes in levels of domestic agricultural output have, therefore, a significant effect upon the level of total available food supplies. This is also because, apart from the staple food commodities such as cereals, a significant part of domestic agricultural output, of both food and non-food commodities, is utilized in many developing countries to pay for imports of other food commodities not produced domestically.

Average annual growth rates of population and agricultural production and the implied per caput growth rates are shown in Table I.2.1. A comparison with Table I.1.1 indicates that rates of growth of agricultural production were generally somewhat lower than those of food production, except in the Other Developing Market Economies and the Asian Centrally Planned Economies where agricultural production grew faster than food production during the whole period under review.

Table I.2.1. Rates of growth of agricultural production in relation to population: world and regions, 1961-65 to 1970 and 1970-76

Region	Total population		Agricultural production			
	1961-65	1970-76	1961-65 to 1970	1970-76	1961-65 to 1970	1970-76
Developed market economies	1.0	0.9	1.9	2.2	0.9	1.3
North America	1.2	0.9	1.4	2.8	0.2	1.9
Western Europe	0.7	0.6	2.2	1.6	1.5	1.0
Oceania	1.8	1.7	2.8	1.3	1.0	-0.4
Other developed market economies	1.4	1.6	3.1	2.0	1.7	0.4
Eastern Europe and the USSR	1.0	0.9	2.8	2.0	1.8	1.1
All developed countries	1.0	0.9	2.2	2.1	1.2	1.2
Developing market economies	2.6	2.6	3.1	2.6	0.5	0.0
NSA countries	2.4	2.5	3.1	1.9	0.6	-0.5
Non-MSA countries	2.7	2.7	3.1	3.1	0.4	0.4
Africa	2.5	2.7	2.7	1.1	0.2	-1.5
Latin America	2.7	2.8	2.9	2.9	0.2	0.1
Near East	2.7	2.8	3.1	3.9	0.4	1.1
Far East	2.5	2.5	3.3	2.6	0.8	0.1
Other developing market economies	2.5	2.5	2.3	1.6	-0.2	-0.8
Asian centrally planned economies	1.8	1.7	2.8	2.5	1.0	0.7
All developing countries	2.3	2.3	3.0	2.6	0.7	0.2
World	1.9	1.9	2.5	2.3	0.6	0.4

Since agriculture remains the main source of employment and income for a large majority of the population in most developing countries, it is even more meaningful to analyse growth of agricultural production in relation to the increase in agricultural population and agricultural labour force.

Appendix F shows that world agricultural population was about 1 708 million in 1960 and increased at an annual rate of 0.8% per annum to reach 1 923 million by 1975. During the same period, the world agricultural labour force (Appendix G) rose from 748 to 788 million. However, as a proportion of the total world population or the total world labour force, their share has been declining continuously (Appendix H), largely due to the world-wide phenomenon of migration from the agricultural sector to the non-agricultural sector. Thus, agricultural labour force, as a percentage of the total, stood at 57.7% in 1960 and is estimated to have declined to 47.9% by 1975.

In the developed countries, where the agricultural population and the agricultural labour force are already small segments of the total population and the total labour force respectively, there has been a continuous and rapid decline, not only in relative shares but also in absolute numbers. In the developing regions, on the other hand, both the agricultural population and the agricultural labour force grew substantially. The growth, despite high rates of movement away from agriculture, is a reflection of the large proportion of agricultural to total population and the high total population and labour force growth rates in the developing regions (Appendices D and E).

The trend rates of annual change in agricultural population and labour force in the developed and developing regions are shown alongside those of agricultural production in Tables I.2.2 and I.2.3. The consequential rates of change in per capita terms indicate respectively the trends in growth of agricultural output per agricultural person and of labour productivity in agriculture. These indicate that, mainly as a result of continuous growth in agricultural population and labour force, growth rates of output per person and productivity per worker have been low in developing regions - less than 2% in most cases. In Africa, the Far East and the Pacific Islands they have, in fact, declined significantly during 1970-76.

The higher growth rates of agricultural output per person and per worker in the developed regions during the past decade and a half as compared with developing ones, imply that the large difference in the levels of agricultural productivity already existing between the two regions has widened further. The data on average levels of agricultural output per person and per worker for 1964-66, 1969-71 and 1974-76 in Appendix I suggest that in 1964-66 agricultural productivity in developed countries on an average was more than nine times higher than in the developing countries and in 1974-76 more than 13 times.

Table I.2.2. Average annual rates of growth of agricultural production
in relation to agricultural population: world and regions,
1961-65 to 1970 and 1970-76

Region	Agricultural population		Agricultural production			
	1961-65 to 1970	1970- 76	Total 1961-65 to 1970	1970- 76	1961-65 to 1970	1970- 76
..... Percent						
Developed market economies	-3.6	-3.2	1.9	2.2	5.6	5.4
North America	-4.7	-4.5	1.4	2.8	6.1	7.3
Western Europe	-3.7	-3.3	2.2	1.6	5.9	4.9
Oceania	-1.3	-1.3	2.8	1.3	4.1	2.6
Other developed countries	-3.0	-2.6	3.1	2.0	6.1	4.6
Eastern Europe and the USSR	-3.1	-2.8	2.8	2.0	5.9	4.8
All developed countries	-3.3	-3.0	2.2	2.1	5.5	5.1
Developing market economies	1.7	1.6	3.1	2.6	1.4	1.0
Africa	1.7	1.8	2.7	1.1	1.0	-0.5
Latin America	1.1	0.9	2.9	2.9	1.8	2.0
Near East	1.6	1.5	3.1	3.9	1.5	2.4
Far East	1.7	1.6	3.3	2.6	1.5	1.0
Other developing countries	1.8	1.8	2.3	1.6	0.5	-0.2
Asian centrally planned economies	0.7	0.5	2.8	2.5	2.1	2.0
All developing countries	1.3	1.2	3.0	2.6	1.7	1.4
World	0.8	0.5	2.5	2.3	1.7	1.8

Table I.2.3. Average annual rates of growth of agricultural production
in relation to agricultural labour force: world and
regions, 1961-65 to 1970 and 1970-76

Region	Agricultural labour force		Agricultural Production			
			Total		Per agricultural worker	
	1961-65 to 1970	1970- 76	1961-65 to 1970	1970- 76	1961-65 to 1970	1970- 76
..... Percent						
Developed market economies	-3.6	-3.1	1.9	2.2	5.5	5.3
North						
North America	-4.0	-3.8	1.4	2.8	5.4	6.6
Western Europe	-4.1	-3.1	2.2	1.6	6.3	4.7
Oceania	-0.7	-1.1	2.8	1.3	3.5	2.4
Other developed countries	-2.6	-2.9	3.1	2.0	5.7	4.9
Eastern Europe and the USSR	-3.4	-2.3	2.8	2.0	6.2	4.3
All developed countries	-3.5	-2.7	2.2	2.1	5.7	4.8
Developing market economies	1.1	1.2	3.1	2.6	2.0	1.4
Africa	1.3	1.3	2.7	1.1	1.4	-0.2
Latin America	0.7	0.9	2.9	2.9	2.2	2.0
Near East	0.9	1.0	3.1	3.9	2.2	2.9
Far East	1.2	1.2	3.3	2.6	2.1	1.4
Other developing countries	1.4	1.6	2.3	1.6	0.9	0.0
Asian centrally planned economies	0.5	0.4	2.8	2.5	2.3	2.1
All developing countries	0.9	0.9	3.0	2.6	2.1	1.7
World	0.3	0.5	2.5	2.3	2.2	1.8

Section 3. Per Caput Food Supplies

The impact of the trends of growth in food and agricultural production and population on per caput food supplies in terms of calories, protein and fat, has been summed up in the food balance sheets prepared for 162 countries. These food balance sheets contain for each food item data, not only on the total of domestic food production, but also on quantities imported and changes in stocks, etc. Thus, growth in food supplies available in a country during a given period need not be the same as growth in food production. Utilization of supplies in food balance sheets is divided into quantities exported, fed to livestock, used as seed or for manufacturing, quantities lost during transportation and storage, and finally the quantities available at the retail level for human consumption.^{1/} Per caput supply of each food item is obtained by dividing the quantity available for human consumption by the number of persons actually partaking of it, and is expressed in terms of caloric value and protein and fat content.^{2/} Appendix C presents country data on the per caput calorie and protein supplies for 1961-63 and 1972-74.

Data on the average daily amount of calories available per person in various regions and their proportion to average daily requirements are shown in Table 1.3.1. These data indicate that per caput food supplies in the developed countries were already high in 1961-63, and continued to grow steadily up to 1972-74. So also did supplies in developing countries as a whole but from a lower base and, in terms of calories at least, in inadequate relation to requirements.

Among the developed regions, daily per caput calorie supplies have been highest in North America, having increased by 6% during the period under review and reaching 3 530 calories by 1972-74. Then follow eastern Europe and the USSR where calorie supplies at 3 460 daily per caput in 1972-74 were 7% higher than they were 12 years earlier. Oceania showed the lowest increase at 2%.

On the other hand, there was a disparity in the trends among the developing regions. Whereas in all the regions there was an increase in 1972-74 over the level in 1961-63, the increase was only slight during the 1970s in the Near East and Latin America, and an actual decrease in this period in Africa and the Far East. This was, no doubt, due to very poor harvest in 1972 mentioned earlier in Section 1.^{3/}

1/ Losses after the food passes out of the retail outlets are not taken into account.

2/ The data on per caput food supplies represents only average supply for the population as a whole and do not indicate what is actually consumed by individuals.

3/ The improved harvests in 1975 and 1976 indicated earlier, no doubt imply improved per caput food availability in 1975 and 1976. Food supply analysis for all the countries for these years are now under preparation, the results of which will be subject to subsequent FAO communications on the food and nutrition situation.

Table I.3.1. Per caput daily food supply in terms of calories,
absolute and as a percentage of requirements

Region	Calorie supply				Supply as percent of requirement			
	1961-63	1964-66	1969-71	1972-74	1961-63	1964-66	1969-71	1972-74
.... Kilocalories per caput								
Developed market economies	3 130	3 170	3 280	3 340	123	124	129	131
North America	3 320	3 360	3 500	3 530	126	127	133	134
Western Europe	3 200	3 230	3 330	3 390	125	126	130	132
Oceania	3 300	3 320	3 320	3 370	124	125	125	127
Other developed market economies	2 570	2 650	2 760	2 850	109	112	117	121
Eastern Europe and the USSR	3 240	3 270	3 420	3 460	126	127	133	135
All developed countries	3 170	3 200	3 330	3 380	124	125	132	132
Developing market economies	2 110	2 130	2 190	2 180	92	93	96	95
MSA countries	2 040	2 030	2 080	2 030	91	90	92	90
Non-MSA countries	2 210	2 250	2 330	2 360	95	96	100	101
Africa	2 070	2 100	2 150	2 110	89	90	92	91
Latin America	2 400	2 470	2 530	2 540	101	104	106	107
Near East	2 290	2 340	2 410	2 440	93	95	98	100
Far East	2 010	2 000	2 070	2 040	91	90	94	92
Other developing market economies	2 130	2 200	2 290	2 340	93	96	100	103
Asian centrally planned economies	1 960	2 110	2 220	2 290	83	90	94	97
All developing countries	2 060	2 120	2 200	2 210	89	92	95	96
World	2 410	2 460	2 540	2 550	101	103	106	107

The particularly unfavourable and deteriorating situation in the MSA countries is demonstrated by the fact that the calorie supply was only 2 040 calories per person per day in 1961-63 and even lower in 1972-74. In the non-MSA developing countries, on the other hand, there was an increase during this period of 7% from 2 210 to 2 360 calories.

Data on daily per caput supply of protein (total and that from animal origin) are given in Table I.3.2. They show that the difference in per caput availability of protein between developed and developing countries as a whole was even larger than that for calories. Among the developed regions, North America had the highest protein supply, followed by eastern Europe and the USSR where the situation started improving toward the end of the 1960s so that by 1972-74 their supply almost reached the level of North America. In developing countries as a whole, the per caput supply of total protein was only 58% of that in developed countries, and this proportion remained unchanged during the entire period under review. Among the developing regions, the lowest level was in the Far East and the highest in Latin America and the Near East. It may also be noted that the supply in MSA countries was 11% less than that in non-MSA countries in 1972-74.

It will be noted that the above-mentioned differences are almost entirely due to the much larger availability of proteins of animal origin whereas the levels of vegetable origin protein were practically the same in both developed and developing countries. In fact, the proportion of animal proteins which was 49% in the case of developed countries in 1961-63 rose to 55% in 1972-74, whereas in developing countries it remained stationary at one fifth.

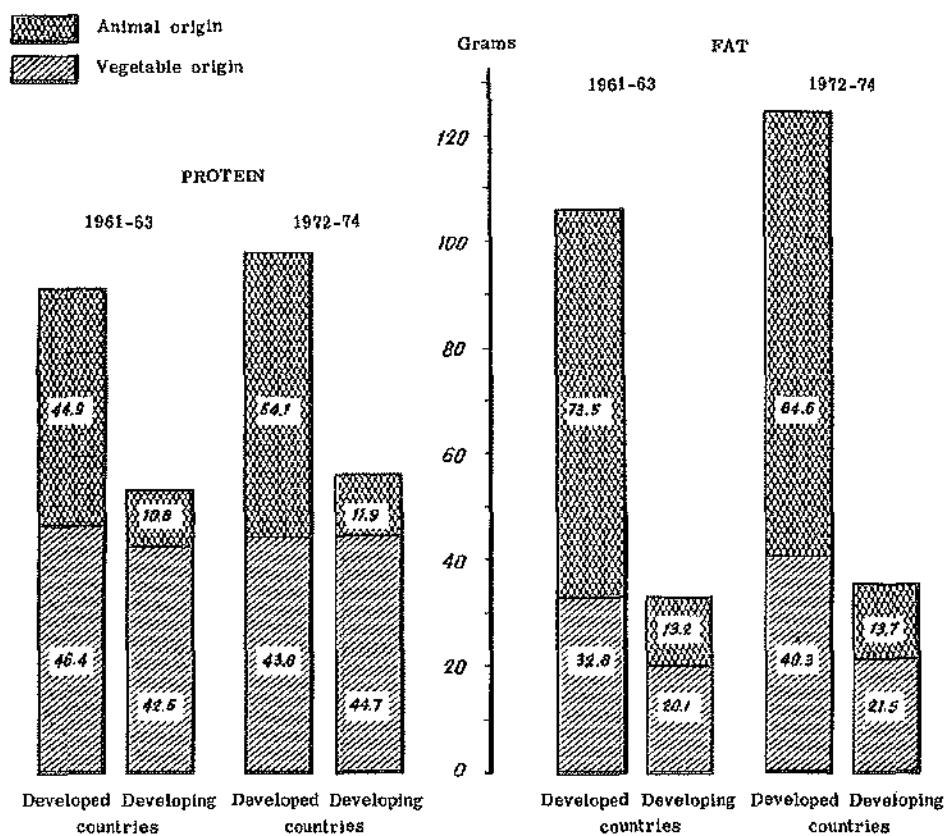
Figure 3 illustrates the above aspects of the protein situation along with that of fats. It will be seen that developed countries had slightly more than three times more fat available on a per caput basis than the developing countries in 1961-63 which ratio increased to three and a half times in 1972-74. However, unlike in the case of proteins, the per caput supply of vegetable origin fat in the developed countries was about 60% more than in the developing countries in 1961-63 and increased to almost 90% more in 1972-74. In fact, the developed countries increased their per caput supply of vegetable fat by 23% over the period under review and that of animal fat origin by only 15%.

More detailed information on per caput food supplies by region, in terms of calories, protein and fat, related index numbers and growth rates is shown in Appendixes J and K.

Table I.3.2. Per caput daily food supply in terms of protein (total and animal)

Region	Total protein				Animal protein			
	1961-63	1964-66	1969-71	1972-74	1961-63	1964-66	1969-71	1972-74
..... Grams								
Developed market economies	90	91	94	95	48	50	55	56
North America	101	102	104	104	67	69	72	71
Western Europe	88	89	92	93	44	46	50	52
Oceania	98	100	100	101	64	66	67	67
Other developed market economies	74	76	82	85	26	28	36	39
Eastern Europe and the USSR	95	95	101	103	38	39	47	50
All developed countries	91	92	97	98	45	47	52	54
Developing market economies	53	53	55	54	11	11	12	11
MSA countries	53	52	53	51	7	7	8	7
Non-MSA countries	54	55	57	57	15	15	16	16
Africa	52	53	54	53	10	10	11	10
Latin America	54	65	66	65	25	25	26	25
Near East	53	64	65	65	13	13	14	14
Far East	49	48	50	49	7	7	7	7
Other developing market economies	44	46	49	51	15	16	18	20
Asian centrally planned economies	54	58	61	63	11	12	13	13
All developing countries	53	55	57	57	11	11	12	12
World	65	67	68	69	22	22	24	24

Figure 3 - PROTEIN AND FAT SUPPLY IN DEVELOPED AND DEVELOPING COUNTRIES : 1961-63 AND 1972-74
(Grams per caput per day)



Section 4. Composition of Per Caput Food Supplies

Per caput food supplies in developing countries generally were not only inadequate in relation to energy requirements but also much more monotonous in their composition, reflecting a lack of diversity in their diets. This is clearly illustrated in Figures 4 and 5 and Tables I.4.1 through I.4.4,^{1/} which show the percentage contribution of various food groups to per caput calorie and protein supplies.

Staple foods

At the world level, cereals contributed about 50% of per caput calorie intake. But their share in the diets of the developed countries was only 36% in 1961-63. This was in sharp contrast to the MSA developing countries where approximately two thirds of total calories were obtained from cereals and the non-MSA developing countries where this share was a little more than half. Maximum reliance on cereals as a source of dietary energy was in the Far East and the Near East regions, and the minimum in Latin America. During the period under review, the importance of cereals as a major component of diet was steadily declining in the developed countries, partly due to the growing share of meat. On the other hand, dependence in the Far East on cereals as a source of calorie supplies rose slightly between 1961-63 and 1972-74, mainly due to shrinkage in the availability of pulses, nuts and seeds.

Pulses, nuts and seeds are important items of consumption in developing countries, mainly as a source of protein of which they provided almost one fifth of per caput supplies in MSA countries in 1961-63. Per caput dependence on them was highest in the Far East, followed by Africa and Latin America. In developed countries, their importance in the diet was much less. The importance of this group of products as a source of dietary energy was declining in all developing regions, especially in the Far East where their share in protein supplies fell from about 19% in 1961-63 to 13.5% in 1972-74.

Roots and tubers supply little protein or fat, but are a significant source of calories in Africa where they provided more than 20% of per caput calories. Between 1961-63 and 1972-74, the extent of dependence on this group of commodities for calories declined in all regions, developed and developing, except in the MSA countries, where it increased from 3.8% in 1961-63 to 4.2% in 1972-74.

Animal products, i.e., milk, eggs, fish, meat and offals, are important items of staple food, mainly in the developed countries, where they contributed about one third of per caput calorie supplies and more than half those of protein. In some developing countries also, especially the non-MSAs, and in Latin America and the Near East, these products contributed a fair share in per caput protein supplies. But in Africa and the Far East, comprising the bulk of the population

^{1/} Aggregate figures for developing and developed countries are not shown in these tables but are given in Figures 4 and 5.

Table I.4.1. Percent contribution of various food groups to daily per caput calorie supply in developed and developing countries and the world

Food group	Developing countries						Developed countries				World	
	Developing market economies				Asian centrally planned economies		Developed market economies		Eastern Europe and the USSR			
	MSA countries		Non-MSA countries									
	1961-63	1972-74	1961-63	1972-74	1961-63	1972-74	1961-63	1972-74	1961-63	1972-74		
Number of calories	2 040	2 030	2 210	2 360	1 960	2 290	3 130	3 340	3 240	3 460	2 410 2 550	
	..... Percent										
Vegetable Products	93.9	93.8	89.6	89.7	90.0	90.8	67.9	66.6	76.3	71.9	82.7 82.6	
Cereals	64.6	65.8	50.5	51.6	61.9	65.4	31.0	26.4	46.3	39.2	50.2 49.4	
Pulses, nuts and seeds	9.4	7.2	6.0	5.1	7.3	7.0	2.7	2.7	1.7	1.8	5.5 4.9	
Roots and tubers	3.8	4.2	11.1	9.2	11.4	11.1	4.8	3.8	7.9	6.4	7.4 6.8	
Sugar	7.5	7.8	9.7	10.7	1.7	2.6	12.1	13.2	10.3	12.2	8.5 9.3	
Vegetables and fruit	3.7	3.6	5.2	5.2	2.2	2.0	4.5	4.8	2.5	3.2	3.7 3.9	
Vegetable oils and fats	4.1	4.4	5.2	5.9	2.4	2.4	7.4	9.3	4.6	5.2	5.0 5.7	
Other vegetable products	0.8	0.8	1.9	2.0	0.1	0.3	5.4	6.4	3.0	3.9	2.4 2.6	
Animal products	6.1	6.2	10.4	10.3	10.0	9.3	32.1	33.4	23.7	28.1	17.3 17.4	
Milk	3.1	3.2	2.9	2.8	0.5	0.4	9.0	8.6	8.5	9.5	5.0 4.7	
Eggs and fish	0.5	0.5	1.1	1.4	1.6	1.9	3.0	3.4	2.0	2.8	1.7 2.0	
Animal oils and fats	1.3	1.3	1.4	1.4	0.9	0.8	6.9	6.4	4.8	5.4	3.3 3.0	
Meat and offals	1.2	1.2	5.0	4.7	6.9	6.1	13.1	15.0	8.2	10.3	7.3 7.5	
All food groups	100	100	100	100	100	100	100	100	100	100	100 100	

Figure 4 - DIETARY PATTERN IN THE DEVELOPED AND DEVELOPING COUNTRIES : 1961-63 AND 1972-74
(Percentage share of food groups in per caput calorie supply)

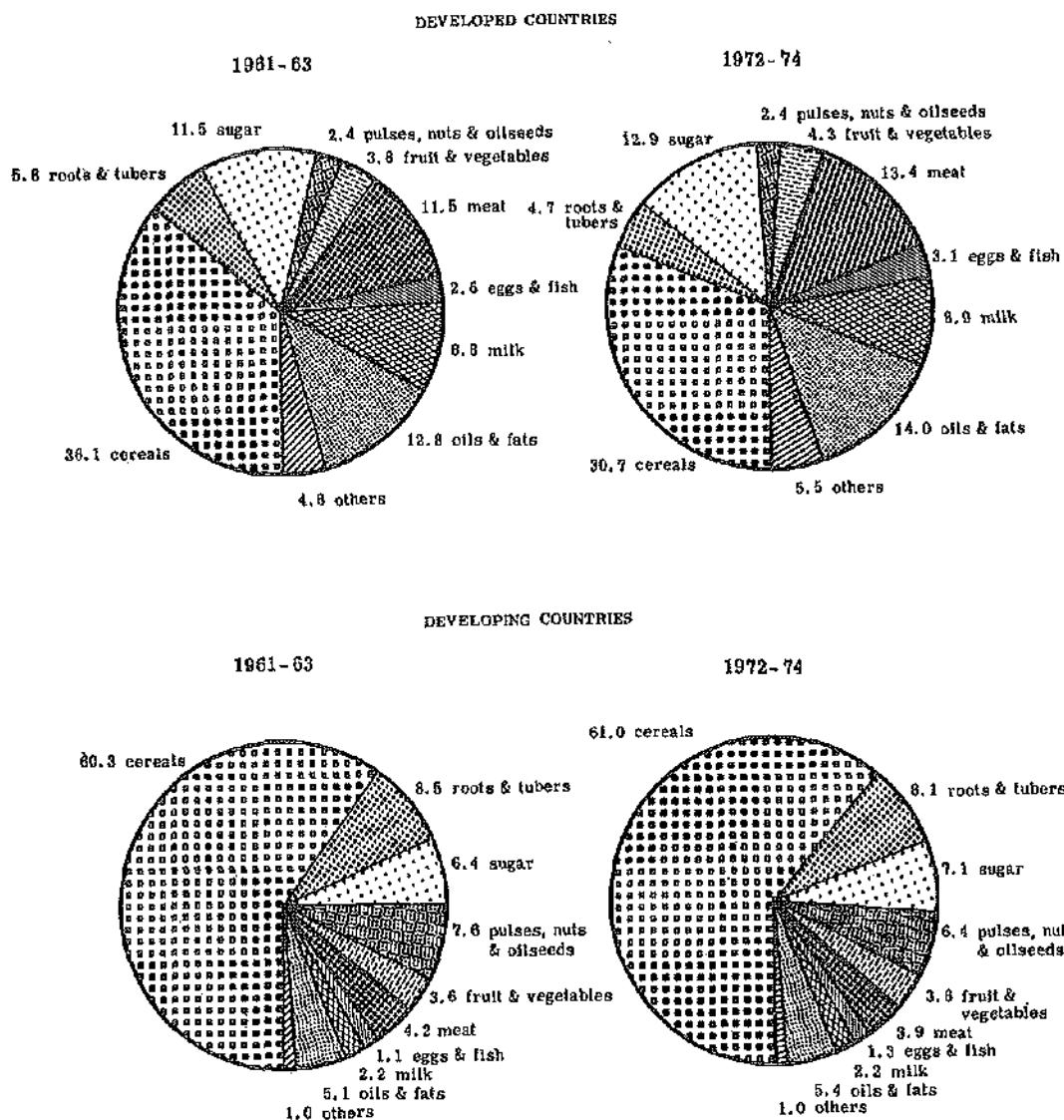


Figure 5 - DIETARY PATTERN IN THE DEVELOPED AND DEVELOPING COUNTRIES : 1961-63 AND 1972-74
(Percentage share of food groups in per caput protein supply)

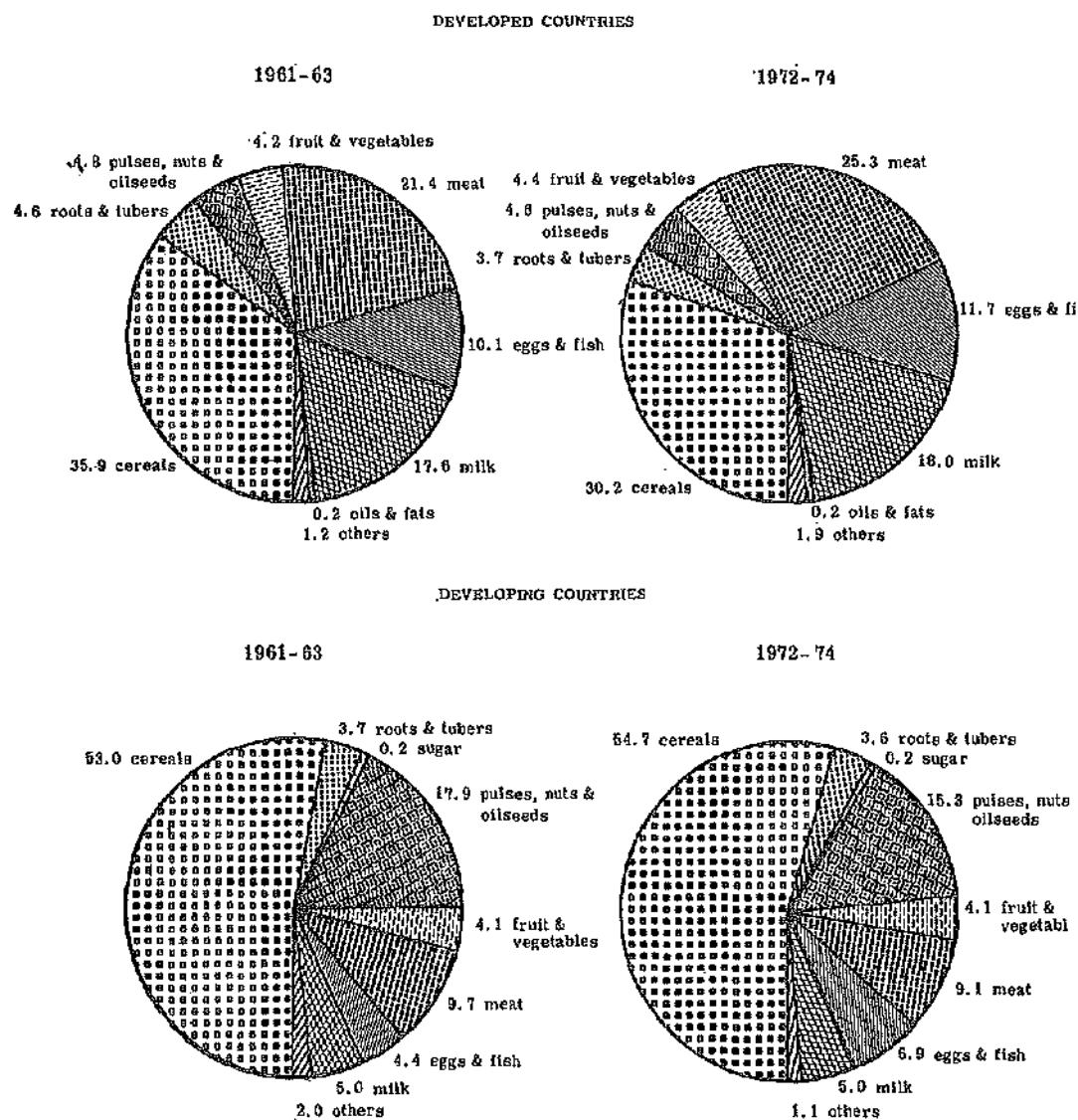


Table I.4.2. Percent contribution of various food groups to daily per caput calorie supply in developing regions

Table I.4.3. Percent contribution of various food groups to daily per caput protein supply
in developed and developing countries and the world

Food group	Developing countries						Developed countries				World	
	Developing market economies			Asian centrally planned economies			Developed market economies	Eastern Europe and the USSR				
	MSA countries		Non-MSA countries									
	1961-63	1972-74	1961-63	1972-74	1961-63	1972-74	1961-63	1972-74	1961-63	1972-74		
Protein (grams)	52.8	51.1	53.8	57.1	53.5	62.9	89.8	95.4	94.5	103.3	65.4	68.5
	..... Percent											
Vegetable products	86.0	85.4	72.1	71.3	79.7	79.3	46.3	41.4	59.7	51.2	66.9	64.9
Cereals	59.9	63.3	48.5	49.6	49.4	50.8	30.8	26.2	45.9	37.9	45.4	44.6
Pulses, nuts and seeds	19.2	14.8	12.7	11.5	20.8	19.2	5.3	5.1	3.6	3.5	12.1	10.9
Roots and tubers	1.6	1.7	4.8	4.2	5.1	5.0	3.6	3.0	6.5	5.1	4.1	3.7
Sugar	0.5	0.5	0.1	0.1	-	-	-	-	-	-	0.1	0.1
Vegetables and fruit	3.8	3.9	4.6	4.6	4.2	4.0	4.6	4.9	3.2	3.6	4.1	4.3
Vegetable oils and fats	-	-	-	-	-	-	0.1	0.1	-	-	-	-
Other vegetable products	1.0	1.2	1.4	1.3	0.2	0.3	1.9	2.1	0.5	1.0	1.1	1.3
Animal products	14.0	14.6	27.9	28.7	20.3	20.7	53.7	58.6	40.3	48.8	33.1	35.1
Milk	7.0	7.3	7.0	7.2	7.1	0.9	18.3	17.9	16.1	18.2	10.6	10.4
Eggs and fish	2.8	3.2	5.6	7.5	8.1	10.0	11.1	12.2	8.0	10.8	7.4	8.9
Animal oils and fats	-	-	0.1	0.1	-	-	0.1	0.1	0.2	0.2	0.1	0.1
Meat and offals	4.1	4.1	15.2	14.0	17.1	9.8	24.1	28.4	15.9	19.5	14.9	15.8
All food groups	100	100	100	100	100	100	100	100	100	100	100	100

Table I.4.4 Percent contribution of various food groups to per caput protein supply in developing regions

of MSA countries, this commodity group provided about 6% of total calories and 13 to 19% of protein.

Meat and offals were important items of diet, mainly in the developed countries, contributing more than 11% of total calories and 21% of the protein in 1961-63. Their share in developing country diets in the corresponding period was significant only in Latin America where the group contributed 8% of calorie and 24% of protein supplies. In the other regions, especially the MSAs, and in the Far East which accounted for a major part of their population, this commodity group was an insignificant source of calories and protein. Nor had the situation changed in any way between the 1960s and the early 1970s when the shares of meat and offal as a source of calories increased in developed countries but declined in developing countries as a group, although there was a marginal improvement in some regions.

Among foods of animal origin, milk is the most important source of protein after meat, contributing more than 10% of per caput supplies at the world level. However, in the developed countries it provided about 18% of per caput protein supplies, but in the developing regions this share was only about 5%. Milk availability per caput was relatively more in Latin America and the Near East and least in the Far East and Africa. Nevertheless, it is worth noting that in the Far East milk contributes twice as much energy and protein as meat and offal.

Non-staple foods

Oils and fats of vegetable and animal origin are the most important single source of fat supplies of which they contributed about 40% at the world level (see Appendix J). In developing countries, the share of vegetable oils and fats in per caput supply was four times higher than that of animal fats and per caput supplies since 1961-63 had also risen in a similar proportion by 1972-74.

In developed countries, animal fats had a much greater share in per caput fat supplies. Between 1961-63 and 1972-74 the share of per caput availabilities of fats of animal origin moderately declined, but those of vegetable fats increased, reflecting a sharp decline in the availabilities of animal fats and a tendency toward their substitution with oils and fats of vegetable origin.

Sugar is an important source of calories of which the share in per caput calories supplies was about 12% in the developed and about 7% in the developing countries. In Latin America the share was as high as 16%, but in other developing regions, sugar contributed only a small percentage in the total food supply, the lowest being in Africa. Between 1961-63 to 1972-74, per caput availability of sugar rose only slightly.

Vegetables and fruit are an important source of minerals and vitamins, and also provide energy, protein and small amounts of fat. At the world level, this group of products supplied more calories than eggs and fish. Their per caput availabilities varied a great deal among different regions, their share in per caput calorie supply being the highest in the Near East and Latin America, even

more than in the developed countries, and the lowest in the Far East. During the period under review, per caput supplies of these products have been decreasing slightly in Africa, the Near East, Asian Centrally Planned Economies and in the MSA countries.

PART II
DIMENSIONS OF MALNUTRITION^{1/}

Section I. Identification of the Malnourished

Part I shows that available world food supplies should be sufficient to provide everyone with an adequate diet. It also shows that on a per caput basis there is an unequal distribution of food among countries, and that in some countries food supplies are inadequate to meet nutritional requirements, even if they were to be distributed equitably.

Health statistics of developed countries indicate the steadily rising prevalence of diseases which may be linked, at least in part, with excessive food intake or improper diets. In these countries attention is being directed to the possible relationships between diet and degenerative diseases. An increasing number of persons among the affluent in the developing countries also suffer from these diseases. Recently several developed countries have initiated food and nutrition policies with the objective of achieving a better nutritional status for their people.

The problem of malnutrition in the developing world results from many complex and intractable causes. Uneven food distribution among countries tends to be related to their wealth, and within poor countries there are very considerable inequalities of distribution between different population groups. Whilst relief measures may alleviate short-term problems, such as may arise from natural disasters, persistent insufficiency of food affects many more people. The malnourished are found particularly in:

- (i) areas in which the ecological and, in particular, the agricultural conditions are unfavourable to the production of food and which are poorly served in terms of food transportation and marketing from other areas;
- (ii) the sectors of the population who are too poor to obtain adequate food, particularly the urban unemployed, casual labourers and the landless agricultural workers;
- (iii) pregnant and lactating women, infants and young children who have special nutritional needs.

^{1/} In this survey malnutrition is used to refer to physical effects on the human body of diet intake inadequate both in quantity and quality. Undernutrition refers to low food intake itself.

Poor land areas

Many of the poorest populations and much of the arid and semi-arid land areas of the world are to be found in the MSA countries. Average calorie supplies per caput in these countries were 170 calories less than in non-MSA developing countries in 1961-63 and this difference was 330 in 1972-74 since the per caput calorie supplies in MSA countries did not show any improvement (Table I.3.1).

Clinical and anthropometric evidence from recent years relating to protein-energy malnutrition (PEM) in some MSA and non-MSA developing countries is shown in Table II.1.1. 1/

Table II.1.1. Incidence of protein-energy malnutrition in developing countries^{1/}

Country	Year of survey	Age group covered (years)	Percentage suffering PEM		
			Severe	Moderate	Total
<u>MSA</u>					
Guyana (national sample)	1971	0 - 4	1.3	30.8	32.1
Haiti	1971	0 - 5	6.0	25.0	31.0
El Salvador (national)	1967	0 - 4	3.1	22.9	26.0
Guatemala (national)	1967	0 - 4	5.9	26.5	32.4
Burundi	1972	0 - 5	2.2	28.7	30.4
Cameroon (Douala)	1973	0 - 5	4.4	36.4	40.8
Central African Empire	1972	0 - 5	3.0	36.4	39.4
Kenya	1968	-	1.0	25.0	26.0
Rwanda	1971	0 - 5	9.8	44.9	54.7
India		1 - 5	2.0	52.7	54.7
<u>Non-MSA</u>					
Venezuela (national)	1971	1 - 6	0.9	14.5	15.4
Barbados (national)	1969	0 - 4	1.2	16.3	16.5
Jamaica (national)	1970	0 - 3	1.4	18.0	18.4
Brazil	1970	0 - 4	6.3	18.9	25.2
Colombia	1968	-	1.7	19.3	21.0

1/ Bengoa, J.M. and Donoso, G. Prevalence of protein-calorie malnutrition, 1963 to 1973. P.A.G. Bull., 4(1): 24-35. 1974.

1/ The sample design of different surveys covered in the Table II.1.1 varied in coverage. Furthermore, the criteria of severity of malnutrition may also have varied as they could vary clinically or anthropometrically, or both.

This evidence clearly shows that in MSA countries from one quarter to one half of young children were suffering from protein-energy malnutrition.

Within countries the nutritional problems can be said to be generally concentrated in poorer areas. In Brazil, a survey carried out during the 1960s showed per caput food supplies of 3 057 calories in southern Brazil, which is fertile and agriculturally rich, and 2 145 calories in northeast Brazil where the land is semi-arid and poor.

In Kenya, it was found that the prevalence of moderate PEM was particularly high in isolated districts with poor soil.

Data available from a recent nationwide household expenditure survey carried out in India^{2/} provides the evidence of differences in average per caput calorie supply in rural areas of India (Table II.1.2).

Table II.1.2. Average calorie supply per consumer unit^{1/} per day in rural areas of India, by state

State	Calories per consumer unit per day
Andhra Pradesh	2 670
Assam	2 660
Bihar	2 730
Gujarat	2 820
Haryana	3 650
Jammu and Kashmir	3 490
Kerala	2 020
Madhya Pradesh	3 650
Maharashtra	2 570
Manipur	3 110
Mysore	2 840
Orissa	2 530
Punjab	3 710
Rajasthan	3 210
Tamil Nadu	2 390
Tripura	3 030
Uttar Pradesh	3 200
West Bengal	2 310

^{1/} Consumer Unit refers to "reference man", i.e., an individual standardized for age and sex.

^{2/} National Sample Survey of India - 26th Round (July 1971 - June 1972). Data relating to India were specially tabulated and made available to FAO by the Government of India for this survey.

Generally speaking, India has a well spread-out network of railways and roads making for a large volume of inland trade. In addition, the government is actively involved in the transfer of food from surplus to deficit areas. Even so, differences in the levels of food availability between different parts of the country are sizeable. The Punjab and Haryana, which have the most productive agriculture, and Madhya Pradesh, a surplus state, each have per consumer unit calorific availabilities of around 3 600 calories for the rural population. On the other hand, in Kerala and West Bengal, the most densely populated states in India, the corresponding figures are among the lowest observed.

Poor people

A basic feature of the present situation is the uneven distribution of food among different socio-economic groups. Available data invariably show that the poorer groups of the population generally have access to smaller amounts of food - amounts that must lead to inadequate dietary intake for a large proportion of that population.

Data on calorie (and in one case, protein) availabilities by income (or expenditure) groups for five countries - India, Sri Lanka, Brazil, Madagascar and Tunisia - are given in Tables II.I.3 - II.I.7.

Table II.1.3. Average calorie and protein availability per consumer unit of households by expenditure groups, India, 1971/72

Expenditure (rupees per caput per month)	Urban			Rural		
	Percent of households	Calories (per consumer unit per day)	Proteins (grams per consumer unit per day)	Percent of households	Calories (per consumer unit per day)	Protein (grams per consumer unit per day)
0 - 15	0.9	1 228	37	3.9	1 493	46
15 - 21	3.7	1 582	46	10.5	1 957	60
21 - 24	3.6	1 821	54	7.1	2 287	69
24 - 28	6.0	1 970	58	10.2	2 431	73
28 - 34	10.2	2 130	62	15.2	2 734	82
34 - 43	14.9	2 343	69	17.7	3 127	93
43 - 55	15.4	2 522	76	14.4	3 513	105
55 - 75	16.9	2 872	82	11.5	4 016	121
75 - 100	11.3	3 190	91	5.2	4 574	139
More than 100	17.0	3 750	110	4.2	6 181	182

Table II.1.4. Calorie availability per consumer unit by income groups in Sri Lanka,
1969/70^{1/}

Income in rupees	Location	Number of households	Calories (per consumer unit per day)
Less than 200	Colombo: Urban	353	2 450
	Rural	185	2 850
200 - 399	Other: Urban	471	2 600
	Rural	1 368	2 650
400 - 599	Colombo: Urban	745	2 600
	Rural	264	2 750
600 and more	Other: Urban	643	2 650
	Rural	1 076	2 800
Urban		682	2 750
	Rural	416	2 900
Rural		841	2 950
		196	2 950

1/ Socio-economic Survey of Sri Lanka, 1969/70. All data in this and the following tables relating to Sri Lanka have been especially tabulated and made available to FAO by the Government of Sri Lanka.

Table II.1.5. Daily calorie availability per caput by income groups, Brazil^{1/}

Income (Cruzeiros per household per year)	Northeast				East				South			
	Urban		Rural		Urban		Rural		Urban		Rural	
	% of house- holds	Calories per caput/day	% of house- holds	Calories per caput/day	% of house- holds	Calories per caput/day	% of house- holds	Calories per caput/day	% of house- holds	Calories per caput/day	% of house- holds	Calories per caput/day
Less than 100	9	1 240	18	1 500	5	1 180	7	1 420	1	1 480	4	2 380
100 - 149	13	1 500	14	1 810	5	1 530	10	2 100	3	1 740	4	2 900
150 - 249	26	2 000	25	2 140	17	1 880	20	2 210	11	1 970	16	2 500
250 - 349	17	2 320	13	1 820	14	2 090	15	2 720	13	2 050	15	1 860
350 - 499	14	2 420	10	2 228	17	2 220	13	2 570	20	2 360	18	2 970
500 - 799	11	2 860	11	2 370	20	2 630	13	2 920	22	2 470	21	3 000
800 - 1 199	5	3 310	5	3 380	11	2 820	8	3 060	14	2 780	9	3 780
1 200 - 2 499	4	4 040	3	2 870	9	3 270	11	3 040	12	3 080	10	4 160
More than 2 500	1	4 290	1	2 900	2	3 750	3	4 100	4	3 170	3	4 770

1/ Food consumption in Brazil: Family budget surveys in the early 1960s. The Getulio Vargas Foundation, Brazil, 1970

Table II.1.6. Daily calorie availability per caput by income groups in rural areas of Madagascar, 1/ 1962

Income (FMG) per household per year	Percent of households	Calories per caput/day
1 - 20	55	2 150
20 - 40	28	2 290
40 - 80	71	2 250
80 - 130	4	2 360
130 - 190	2	2 350
190 - 390	1	2 340
390 - 590	0.3	2 360
Other groups	0.2	...

1/ Madagascar: Budgets et alimentation des ménages ruraux en 1962.
Ministère des Finances et du Commerce, Madagascar.

Table II.1.7. Daily calorie availability per caput by income groups in Tunisia, 1975^{1/}

Income (Dinars) per caput per year	Percent of households				Calories per caput per day			
	Rural	Urban	Big cities	Total	Rural	Urban	Big cities	Total
Less than 30	8.0	3.1	0.3	4.9	1 920	1 415	1 077	1 835
30 - 60	22.6	13.3	2.6	15.5	2 168	1 809	1 429	2 042
60 - 80	15.2	12.1	5.9	12.2	2 431	1 981	1 829	2 255
80 - 100	11.7	11.6	8.2	10.8	2 437	2 200	1 864	2 229
100 - 120	9.4	9.7	7.7	9.1	2 560	2 217	1 913	2 311
120 - 160	12.5	11.6	15.2	12.9	2 702	2 302	2 223	2 459
160 - 200	7.3	11.8	11.8	9.5	2 837	2 381	2 219	2 499
200 - 300	8.1	13.5	18.3	11.9	3 065	2 569	2 219	2 562
300 - 400	2.7	6.8	10.5	5.6	3 013	2 883	2 518	2 762
400 and more	2.5	6.5	19.5	7.6	3 126	2 899	2 469	2 710
All income classes	100.0	100.0	100.0	100.0	2 474	2 228	2 122	2 328

1/ Data from the 1975 Food Consumption Survey made available to FAO by
1^{er} Institut national de la statistique, Ministère du Plan, Tunisia.

In India, mean calorie availabilities steadily rise with increasing per caput expenditure (considered as a proxy for income) in both urban and rural areas^{3/}. This relationship is less clear in Sri Lanka data for rural areas but is markedly similar in urban areas. The same pattern is observed in the data from Brazil, Tunisia and Madagascar, although there is a general tendency for calorie consumption to level off after reaching a certain peak.

These data indicate that the availability of a sufficient supply of food for the family tends to be ensured only at a certain level of income in cash or kind. It is not possible, however, to draw precise conclusions about the extent of undernutrition from this data alone since there may exist considerable variations of calorie intake within income groups; but the data on this are not available. For example, even though the mean calorie availability of the poorest rural households in India is below 1 500 calories per consumer unit per day, many of these households may have a satisfactory food intake since their available food supplies may be considerably above this average.

Studies on direct nutritional status of people belonging to different socio-economic groups within a given country or community are still very few. However, in one case, a study of young children in one rural district of India showed a clear relationship between the extent of deficiency in body weight as compared to the standard weight, economic class and daily calorie intake^{4/}. Table II.1.8 shows a summary of these results.

Table II.1.8. Per caput household calorie intake and body weight of pre-school children (0-5 years) by economic class (Indian rural district)

Economic class	Per caput household calorie intake	Body weight as percentage of standard within each class			
		>90	75-89.9	60-74.9	<60
		..... percent of children			
High	2 435	32.5	54.2	13.3	-
Middle	2 306	16.2	53.0	27.9	2.9
Low	2 140	6.4	36.3	46.8	10.5

3/ For the highest per caput expenditure groups, unusually large numbers of calories may be available partly due to inclusion of food purchased for household domestics not reported as members of the household, and purchases of food to be held in stocks and consumed outside the period of expenditure.

4/ Rao, D.H. and K. Satyanarayana, Nutritional status of people in different socio-economic groups in a rural area with special reference to pre-school children. *Ecol. Food Nutr.* 4:237-242.

Furthermore, the survey showed that clinical symptoms of malnutrition occurred with higher frequency among people belonging to lower economic groups. None of the children of the higher income class had body weights below 60% of the reference weights (the level conventionally taken as indicating severe PEM), whereas in the middle economic class 2.9% and in the lower class 10.5% of the children did not reach this level and could be considered as severely malnourished. Percentages for moderate or sub-clinical malnutrition were 13%, 28% and 47% for children from the high, middle and low income classes respectively. The calorie intake figures showed a similar relationship. The heights and weights of adults followed a similar pattern with people from the high and middle economic classes being taller and heavier than those from the lower classes.

This relationship between anthropometric data, food availabilities and socio-economic class would be expected to be even stronger in urban groups which are almost totally dependent for the food they eat on the market and cannot supplement it in any way from production for subsistence.

None of the evidence regarding the relationship between poverty and low calorie availabilities should be surprising. It is now widely accepted that malnutrition is associated with poverty. Nevertheless, a word of caution should be given; whereas it is probably true that most malnourished people are poor, it is not necessarily true that all poor people are malnourished.

Urban/rural differentials

Surveys in India, Sri Lanka and Brazil have shown without exception that the urban poor have lower calorie availabilities than the rural poor. For the lowest income groups, urban dwellers have calorie availabilities per day of about 300-400 calories less than the rural inhabitants yielding levels close to, or below, those regarded as the minimum if nutritional deprivation is to be avoided. This conclusion, however, must be qualified insofar as the definition of income for rural small farmers is difficult and there can be serious underestimation of the value of household food production intended for direct consumption. If this is true, the rural poor will not be as poor in nutritional terms as their urban counterparts at corresponding levels of income.

The urban poor, especially recent immigrants from rural areas, are deprived of access to food produced in the household for direct consumption or available in these rural groups outside the cash nexus. Without regular and adequate income needed to purchase sufficient food, they are particularly vulnerable to malnutrition. The rapid urbanization under way in most developing countries (Appendix L) will almost certainly accentuate the gravity of this situation. In addition, a rapid decline in the extent of prevalence of breast feeding is associated with urbanization in most of the developing world. This trend, which is particularly alarming for low-income urban families, will be examined later.

The most vulnerable groups among the rural population are the landless agricultural labourers and their families who have to live on a meagre income which may be anything but regular. These labourers are least likely to have access to subsistence food although in some cases they are allowed limited facilities for growing a little food on the land where they may have found employment.

A recent study in a part of rural Punjab in India^{5/} provides further evidence of the interaction between income levels, direct food intake and the nutritional status of children, and bears directly on the nutritional vulnerability of landless labourers. The study compared three groups, the land-owning class, the landless agricultural labourers and the group engaged in "service occupations".

The prevalence of severe and moderate protein-energy malnutrition and infant mortality was high in all groups but much higher among children of landless labourers than of those in the service occupation group, which in turn was higher than for the children of landowners. Fifty-four percent of the children of the landless were moderately or severely malnourished compared to less than 39% of the children of the landowners.

Caloric intakes were low in all income groups and differences in food consumption may be too small to explain the wide variation of PEM prevalence among them. Indeed, it was found that infection related more closely to PEM prevalence than did food intake. These findings, however, show that low income is an important factor in childhood malnutrition but, as the authors suggested, it is not so much because it affects the food intake of that age group, but mainly because it appears to be associated with a number of adverse environmental conditions such as poor sanitation, crowding, etc. Thus, preventive health and educational measures may, under certain circumstances, succeed in reducing the prevalence and severity of PEM in children, even without substantial changes in their economic status or food consumption.

Other vulnerable groups among the rural population are the nomadic tribes and subsistence farmers. Little is known about the calorie availabilities or nutritional status of nomadic tribes, but that they are particularly vulnerable in times of drought, as the Sahelian crisis demonstrated.

5/ Levinson, F.J. *Morinda. An economic analysis of malnutrition among young children in rural India, 1974.* Cambridge, Mass. Cornell/Mit International Nutritional Policy Series.

Table II.1.9. Family income, food intake and nutritional status of children (6-24 months of age) in rural India (Punjab)

Socio-economic group	Average monthly family income	Average nutrient allowances ^{1/}	Prevalence of PEM ^{2/}		Average numbers of dead siblings
			Percentage		
	US\$				
Landowners	45.00	Kcal: 63.6 Protein: 87.0 Vitamin A: 86.1 Iron: 38.0	Moderate PEM: 35.2 Severe PEM: 3.6 Total: 38.8		0.49
Service occupation	9.00	Kcal: 60.7 Protein: 85.5 Vitamin A: 85.6 Iron: 36.8	Moderate PEM: 37.5 Severe PEM: 10.4 Total: 49.7		0.53
Landless	20.00	Kcal: 59.2 Protein: 83.3 Vitamin A: 83.2 Iron: 35.1	Moderate PEM: 45.1 Severe PEM: 12.3 Total: 57.4		0.85

1/ Nutrient intake compared with "daily allowances of nutrients for Indians", prepared by the Indian Council of Medical Research, 1958.

2/ Gomez classification: Moderate PEM = 2nd degree malnutrition = 60-75% of standard weight for age; Severe PEM = 3rd degree malnutrition: 50% of standard.

Farmers with limited areas of land, who grow food mainly for their subsistence, generally find it difficult to feed their families adequately even in good years. On the other hand, in times of poor harvests, or in the season prior to the harvest when stocks even in the markets are exhausted and prices are generally higher, food availability for them may become inadequate. Moreover, often such farmers tend to live in remote areas which lack adequate communication facilities, and where transportation of food in times of need is difficult and irregular. Thus, the purchasing power to buy enough food is lacking and marketing arrangements do not exist.

The extent of dependence of rural inhabitants on self-produced food can be observed from recently conducted food consumption surveys in Tunisia and Brazil. Table II.1.10 shows examples.

Table II.1.10. Average calorie consumption and percentage of self-produced food (autoconsumption) in Tunisia and Brazil^{1/}

	Per caput calorie availability	Percentage of self-produced calories
Tunisia (1975)		
Rural	2 474	37
Urban	2 228	9
Big cities	2 122	2
Brazil (1974/75)		
Region I Rural	2 191	26
Urban	2 108	8
Rio de Janeiro	2 128	4
Region III Rural	2 548	50
Urban	2 256	13
Porto Alegre	2 306	7
Curitiba	2 157	8

1/ Data from 1974-75 household sample survey in Brazil used in this survey were made available to FAO by the Government of Brazil.

These data show quite clearly that although calorie availabilities are rather higher in rural areas, a substantial part of calorie supply is derived from self-produced food.

In a recent rural household expenditure survey in Chad, 82% of the food consumed was self-produced. Supporting evidence is provided by a similar survey in the Ngozi and Muyinga Region of Burundi which reported the proportion of food obtained from self-production by season. The figures ranged from 62. to 72% over the year. Finally, on this point available data on food consumption in rural areas of Madagascar show a negative relationship between the extent of auto-consumption and income.

Table II.1.11. Madagascar: rural household variation in extent of self-produced food according to monetary income, 1962

Income class (FMG per household per year)	Per caput calorie availability	Percent of households	Percentage of home-grown food
Less than 20	2 154	54.6	63.1
20 - 40	2 292	27.7	70.9
40 - 80	2 256	11.0	68.4
80 - 130	2 359	3.8	67.7
130 - 190	2 350	1.5	55.9
190 - 390	2 341	0.8	35.9
390 - 590	2 456	0.3	30.9

Source: François, P. Budgets et alimentation des ménages ruraux de Madagascar en 1962. Publication Secretariat d'Etat, Chargé de la coopération, Paris 1966, quoted in J. Perissé, F. Sizaret and P. François, "The effect of income on the structure of the diet". FAO Nutrition Newsletter, Vol. 7, No. 3, July-Sept. 1969.

Mother and children^{1/}

From a nutritional standpoint, growth and reproduction phases are the most demanding in the life cycle. Children and pregnant or lactating women are therefore particularly vulnerable to dangers of inadequate food supplies and ill-health.

There are data indicating that weight gain during pregnancy is lower in poorly nourished population groups. Indeed, when conditions of dietary inadequacy

1/ Information used in the preparation of this sub-section was provided by WHO.

exist, the nutritional status of mothers is expected to be reflected in birth weights. Although birth weight is influenced by many factors, a high prevalence of low birth weights (below 2 500 grams, according to WHO) is indicative of short- or long-term poor nutrition of women of gestational age and is associated with high infant mortality. The fact that birth weight is related to the nutritional status of mothers is substantiated by studies in India and Guatemala showing that supplementation of inadequate diets of groups of pregnant women resulted in significantly increased birth weights as compared with unsupplemented groups.

It is estimated that approximately one sixth of the annual global live births (approximately 22 million) are below 2 500 grams in weight and that roughly 95% of all low birth weight babies are born in developing areas. Table II.1.12 shows the percentage of low birth weights for certain regions and countries. The regional definitions used in this table depart from those used elsewhere in this study due to the classification used in the data source. The Table, however, illustrates that, in general, the frequency of low birth weights is below 10% in developed areas, rising to 12-15% in Africa, 20% in South America and to as high as 30% in certain areas, including India.

Table II.1.12. Percentage of live births below 2 500 grams/^{1/}

Region	Percent
North America	7
Caribbean	11
Tropical South America	20
North Europe	4
Western Europe	7
North Africa	10
West Africa	15
Central Africa	15
Southwest Asia	10
Southern Asia	30
India	30

^{1/} WHO document (unpublished)

Young children

It is generally accepted that young children are particularly vulnerable to nutritional deficiencies. Results of clinical and anthropometric studies of young children have been shown in Table II.1.11/

^{1/} Any discussion of child malnutrition also involves considerations of poverty and urban/rural differences. However, in this part, nutritional data relating to young children have been used only as illustrative examples.

As for lactation, the output of milk may be reduced in malnourished women, although the composition in terms of major nutrients does not seem to be grossly affected, except for fat. It is only under conditions of particularly severe dietary deprivation that lactation does cease. Although prolonged lactation constitutes a heavy burden on the mother's nutritional stores, it has the advantage of retarding resumption of ovulation, thus acting as a child-spacing factor. From that point of view, it acts as a protective element of long-term nutritional status of both mother and child.

Data on nutritional status of young children has been used to illustrate nutritional disparities among countries (Table II.1.1) and among various socio-economic groups (Tables II.1.8 and II.1.9). Malnutrition manifests itself most frequently in this age group. It is very seldom seen during the first six months of life in breast-fed infants. Beyond this age, however, inadequate food supplementation of breast milk, coupled with repeated exposure to infection is responsible for impaired growth in a good proportion of children in developing regions. It is usually in the course of the second year, corresponding to weaning age, that severe cases of PEM (kwashiorkor, marasmus or mixed type) occur with the highest frequency. Available data indicate that PEM is predominantly due to caloric deficiency except, perhaps, in areas with strong reliance on roots and tubers for staples where protein insufficiency is also involved.

Reference has been made earlier to two studies in rural India in which it was found that malnutrition occurred with higher frequency among young children of poorer socio-economic groups, particularly the children of the landless. However, even among the higher economic groups, from 13 to almost 40% of children suffered from moderate or severe PEM. This suggests that childhood malnutrition is not to be found only in the most deprived groups. Whether urban children are, on the average, in a better nutritional state than rural children cannot be said. However, since food intake as well as disease and infection are the major determinants of nutritional status, urban/rural differentials in feeding practices and health service coverage are reflected in differences in frequency, severity and age distribution of PEM. Particularly, the drastic decline of breast feeding in urban areas has a dramatic impact on child malnutrition in low-income groups. The many causes of this decline, both in proportion of mothers who breast feed and in the duration of breast feeding by those who do, include the increasing participation of urban mothers in work force, the promotion of breast milk substitutes, the increasing vogue of bottle feeding as a status symbol and acceptance of these trends by many health professionals.

Under the unfavourable economic and sanitary conditions found in low-income urban groups, the consequence of bottle feeding is a high prevalence of diarrhea and gastrointestinal tract infections which, coupled with frequent overdilution of the milk, leads to increased incidence of PEM. Bottle feeding is also associated with an earlier age of onset of malnutrition.

In Chile, where a significant decline in breast feeding has taken place in the last decade, it was reported that 88% of children hospitalized with severe PEM were under 1 year and 76% were below the age of 6 months. In a West African city hospital, 90% of infants (below the age of 6 months) hospitalized with

diarrhea and dehydration, were bottle fed. These percentages are much higher than the proportion of bottle-fed children in the population as a whole. Available data from Chile, India and other South American regions show that mortality is much higher in never breast fed and prematurely weaned infants.

In addition to the cost to children's health of a decline in breast feeding, there is an economic cost that should not be overlooked. Breast milk is a commodity of very high nutritious value and low production cost which is potentially almost perfectly equitably distributed among the needy - something that, as has been shown, cannot be said about supplies of other types of food. If all mothers of infants in the world were currently in full lactation, the amount involved for one year would be approximately 30 billion litres of milk, representing about 22 500 billion calories and 400 billion grams of protein. At the family level, the economic cost of a suitable formula milk necessary for replacing breast feeding has been estimated at 50% of the minimum wage in Tanzania and Kenya. In India, a low-paid working woman would have to use her total income in order to purchase a manufactured formula milk in sufficient quantities.

The end result of severe malnutrition for many children is death. Infant and childhood mortality rates are composite public health indicators, but they reflect, at least partly, the severity of malnutrition in a given community. An extensive Latin American study on childhood mortality patterns^{6/} provides some insight into the impact of nutritional deficiency on death rates. The synergism of malnutrition and infection was once more illustrated by this study. Nutritional deficiency was found to be a factor in more than 60% of all deaths from disease infection.

Out of 35 000 deaths of children under 5 years of age, it was found that 34% had nutritional deficiency as an underlying or associated cause. The proportion rose to 57% if low birth weights are taken into account. For infants dying under 1 year, the mortality was due to malnutrition as an underlying or associated cause in nearly 19 per 1 000 live births. During the second year of life, nutritional deficiency contributed to more than one half of the deaths from all causes.

Conclusion

The evidence discussed in Part I and so far in Part II, on balance, indicates that the overall supplies of food, though not presently abundant, could be adequate to meet nutritional needs of the world's population if the distribution between and within countries were ideal from a nutritive point of view. It is clear that the malnourished are found particularly in the poorest, mainly MSA countries, in the poorest section of urban population and in rural areas where

6/ Puffer, R.R. and Serrano, C.V. *Patterns of mortality on childhood*. Washington, D.C. Pan-American Health Organization, Scientific Publ. No. 262, 1973.

adverse ecological conditions, land tenure systems and other economic factors lead to the emergence of large landless and unemployed groups of population. These vulnerable groups are unable to buy or grow enough food to meet their needs, and tend to be the groups with least access to health, welfare and educational services, further adding to their deprivation. Within these groups, it is the pre-school children, younger women and school-age children who suffer most often and most severely from poor nutrition.

In a sense, such identification of the malnourished is useful in practice since it explicitly points to the groups in which malnutrition should be reduced and eventually eliminated by measures which will remove the causes of nutritional deprivation, and by direct intervention measures aimed at short-term improvement in the situation of the most vulnerable.

Section 2. Prevalence of Malnutrition

The problems in estimating the total number of persons who lack adequate food have been a matter of debate for many years. Lack of accurate and objective data makes estimation of these numbers only a rough-and-ready exercise. However, deliberations on the world food problem and ways of resolving it have clearly demonstrated the need for indicators of the magnitude of under- and malnutrition at any given time, and of changes over time in this magnitude. FAO, therefore, regards it as useful to continue its attempt to assess and measure the extent of prevalence of under- and malnutrition.

In extreme cases, nutritional deprivation can be easily detected. However, even when no obvious visible symptoms are present, dietary deficiencies may have had serious effect on an individual's health, physical growth and working capacity. Although it is possible that individuals or groups may lead a life of tolerable levels of mobility and activity at levels of food intake which would be inadequate for others, an attempt can be made to estimate the number of persons with food intake at such a low level as to render it most likely that they may be suffering from some form of nutritional deprivation. All that could be said about these persons is that they are, in all probability, undernourished even though some of them may have adapted successfully to even such low intakes, just as some persons, on the other hand, with higher food intakes may be suffering from nutritional deprivation.

Progress continues to be made regarding the estimation of average food requirements even though considerable uncertainty still remains about the dispersion of individual requirements about the average. How much allowance is to be made for variations in activity, climate, sex, body weight, physiological variability and so forth are matters still under review.^{1/}

Inadequate intakes of energy and/or protein are frequently observed in developing countries. In the light of the most recent recommendations regarding the coverage of protein needs, it would seem improbable that a dietary intake which is sufficient to cover energy requirements will be insufficient to meet protein requirements, except for the possible exception of populations which subsist on starchy roots, tubers, plantains, etc., all of which are extremely low in protein content. On the other hand, if a diet is adequate in protein content but the quantity of food eaten is insufficient to meet energy needs, some of the protein intake will be used as a source of energy and the diet would in practice be deficient both for energy and protein requirements.

1/ Estimates of undernourished populations given in the World Bank Staff Occasional Paper No. 23, by Reutlinger and Selowsky, rely on a critical limit set at or only a little below the mean requirement and thus run the risk of including in the estimate many individuals whose food intake is low because their requirements are also below that critical limit. Furthermore, the authors have used a very broad regional approach instead of a country approach subsequently adopted in this survey.

There are other nutritional diseases caused by lack of specific nutrients, some evidence on the prevalence of which is available.^{2/} The incidence of some diseases, e.g., pellagra and scurvy, has declined, but others such as Vitamin A deficiency, goitre and nutritional anaemias are still widely prevalent.

For making an estimate of the number of persons suffering from inadequate food intake, attention is focused on those with low calorie intakes. Many of these will no doubt be suffering from both energy and protein insufficiency.

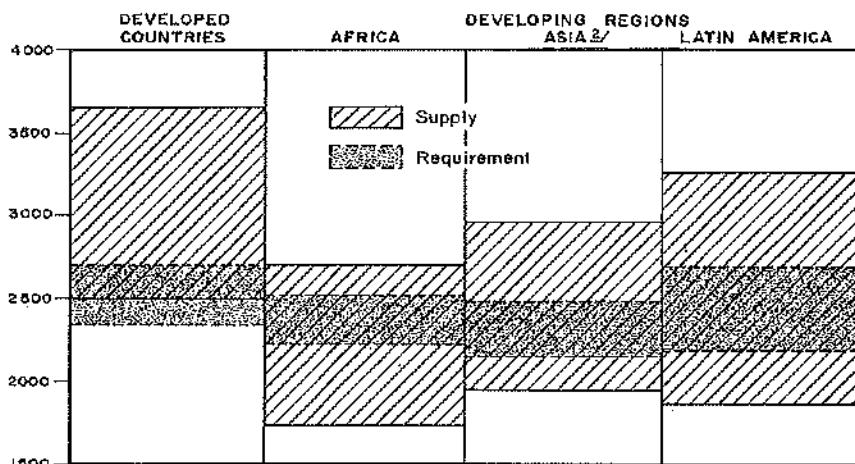
Dietary energy supply by region in terms of calories and as percentage of requirements was given in Table I.3.1. At the world level, the overall energy supply is above average per caput requirements, the excess of 7% in 1972-74 being slightly higher than in 1961-63. However, developed countries as a whole consumed on the average 32% more than the requirement (up from 24% in 1961-63) whereas dietary energy supply in the developing countries, though improved from 11% deficiency below the requirement in 1961-63, still remained 4% deficient in 1972-74.

^{2/} Vitamin A deficiency is a major public health problem in the Western Pacific, the Far East, semi-arid zones in Africa, and certain parts of Latin America, where it contributes extensively to ocular diseases. It is estimated that, at present, between 50 000 and 100 000 children become blind every year because of keratomalaria. Nutritional anaemias are found everywhere, but it is in the developing countries that their frequency and severity are the highest. Young children and women of gestational age are the most vulnerable groups. The prevalence is estimated at 20-25% in children, 20-40% in adult females and up to 10% in adult males of developing countries. Iron-deficiency anaemia is the predominant type. Poor absorption of available iron in predominantly vegetarian diets, as well as iron losses associated with parasitic diseases, are probably the most important etiological factors responsible for this situation. Folate deficiency is often associated with iron deficiency, particularly in pregnant women and in young children with PEM. It has been estimated that endemic goitre affects at least 200 million people in the world, but its geographic distribution is patchy. It occurs in some population groups living in high mountain ranges (Alps, Andes, Himalayas) and has been reported also from the plateaus of Asia, Australia, Europe and North America. Females, particularly adolescent girls, appear particularly vulnerable. Endemic cretinism bears a close epidemiological relationship to endemic goitre; the prevalence and severity of goitre in women of gestational age should therefore be of major concern. Goitre is generally attributable to inadequate intake of iodine in food, but the presence of goitrogenic substances in food may play a role in its development in some cases.

The situation regarding energy supplies in relation to requirements in individual countries in 1961-63 and 1972-74 is shown in Appendix C.^{1/} Figure 6 shows graphically the relationship of per caput calorie supply to requirement for several groupings of countries during 1972-74. This figure indicates that the range of variation in requirement is much shorter than that in supply and that, while developed countries were clustered above the range of requirements, a large number of developing countries was well below it.

Country averages, however, do not reflect within-country disparities discussed earlier. To make an estimate of the numbers undernourished, it may therefore be appropriate to use evidence regarding distribution of food intake as well as clinical and anthropometric data. For example, these data for children (although usually available only for small and often unrepresentative samples) indicate that up to 60% of all young children in the developing world may be inadequately nourished. Data on the distribution of actual food intake or

Figure 6 - PER CAPUT CALORIE SUPPLY AND REQUIREMENT IN 1972-74^{1/}



^{1/} The supply and requirement for individual countries are given in Appendix C.
^{2/} Including the Near East and Far East.

3/ The figures were obtained from food balance sheets prepared for each country as explained in Part I.

consumption have been obtained from only a few surveys. Although there is more information on food expenditure obtained during household budget and expenditure surveys, such information can be used to draw conclusions about the extent of undernutrition if it were possible to establish a functional relationship between household food expenditure and actual food consumption patterns. For deriving this relationship, it is necessary to have available, at least occasionally, results from both types of surveys. At any rate, such surveys can provide estimates of the extent of undernutrition only in those countries where they have been conducted, and unless they cover a large part of the world population, it would not be possible to generalize their results to the whole world.

Data from food consumption surveys were available to FAO for very few countries only. Household budget or food expenditure surveys were available for a larger number of countries, but the data were seldom supplemented by the corresponding information on food intake distribution. On the other hand, information on at least the per caput food supply in terms of calories derived from food balance sheets is available for most countries of the world. In the absence of more reliable data on food intake, this average supply would be a good indicator of the per caput calorie intake. However, the food balance sheets do not provide information on the distribution of calorie intake in the population which, as mentioned earlier, is essential to estimate the extent of undernutrition in a country. Thus, it was decided to make rough estimates of undernutrition on a world-wide basis by following a procedure similar to the one used in an earlier study by FAO.^{4/} Below a description is given of this procedure.

Since the data on the joint distribution of individual calorie intake and requirement are not available, several methods have been employed in the past for estimation of the extent of undernutrition in which "critical limits" of intake were based upon some assumptions regarding the distribution of requirements and its variation. However, as pointed out earlier, evidence on this distribution and its variation is very uncertain. It was, therefore, felt more appropriate in this procedure to compare average calorie intake per caput against a critical limit derived from basic physiological considerations. Accordingly, the critical limit adopted here was determined from the energy cost of human body maintenance. An ad hoc expert committee^{5/} set this cost at 1.5 times the Basal Metabolic Rate (BMR).^{6/} If the food available to an individual provides energy at a level less than 1.5 times the BMR, such an individual is likely to be undernourished, since no allowance has been made for activity in these requirements. However, with or without such allowance, variation in individual BMR still exists, and 10% has been suggested as the coefficient of variation. Thus, taking this variation into account, a sufficiently low intake level works out to 0.8×1.5 BMR, i.e., 1.2 BMR, and this was considered a reasonable critical intake limit.

^{4/} Population, food supply and agricultural development, FAO, 1974.

^{5/} Energy and protein requirements - Report of a Joint FAO/WHO ad hoc Expert Committee, FAO Nutrition Meetings Report series No. 52, WHO Technical Report series No. 522, Rome, 1973 (page 36).

^{6/} It must, however, be stressed that the BMR and its coefficient of variation, although possibly better estimated than the patterns of distribution of dietary energy requirements, are based in the main on laboratory measurements of a sample of 2 200 persons over a period of 15 years.

In using this limit one can say that persons with food intake below 1.2 BMR, in all probability, are forced to subsist on quantities of food insufficient to lead a full, healthy, well-developed and active life. Put in another way, such individuals are most probably suffering from some form of energy deprivation.

For estimation of the extent of undernutrition, the mean of the distribution of calorie intake was assumed to be the average supply of calories derived from food balance sheets, prepared for nearly all countries.^{7/} The form of distribution adopted and estimation of its other parameters are explained in the next six paragraphs; the results follow immediately thereafter.

It was postulated that the distribution of calorie intake is skewed, and it was decided to fit indirectly a Beta-distribution to the calorie intake for each country. The probability density function of one simple form of Beta-distribution can be expressed in the following form by taking origin at the lower terminal of the range:

$$f(y) = y^{p-1} (b-y)^{q-1} / P^q B(p, q); \quad 0 \leq y < b; \quad p, q > 0$$

The range b was assumed to be known, so that there were only two parameters p and q to be estimated for fitting this distribution. These parameters can be expressed in terms of the first two moments about the origin, m_1 and m_2 , as follows:

$$p = m_1 (m_1 - m_2/b) / \sigma^2; \quad q = (b - m_1) (m_1 - m_2/b) / \sigma^2$$

where $\sigma^2 = m_2 - m_1^2$ is the variance of the distribution. Thus, the problem of fitting the Beta-distribution was reduced to setting the lower and upper terminals of the range and estimating the mean and the variance of the calorie intake distribution for each country.

The lower terminal of the range of per caput calorie intake was based on the assumption that a standard or "reference man" cannot survive on less than 1 000 calories. On a per caput basis, this worked out to around 800 calories, the actual figure varying slightly from country to country, depending upon the appropriate conversion factor.

^{7/} Wastage down to retail level has been allowed for in food balance sheets. Although subject to the usual margins of error, the average food supply derived from them is probably the best available indicator of the mean calorie intake.

Before describing how the upper terminal of the range was set,^{8/} it will be explained how the standard deviation of the distribution was estimated.

The standard deviations of the intake distributions have been estimated on the basis of income and expenditure distribution available for many countries by assuming a relationship between per caput intake (C) and per caput income or expenditure (X) of the following form:^{9/}

$$C = a + \beta \log_e X.$$

The standard deviation of C can be thus obtained by multiplying the standard deviation of the logarithm of X by β . Furthermore, when the above relation is assumed to hold between C and X , the calorie-income elasticity is seen to be β/C . Thus, given the calorie-income elasticity at some value of C , β can be estimated by simply multiplying the value of elasticity by the corresponding value of C . Once β has been estimated, it is multiplied by the standard deviation of the logarithm of X to provide an estimate of the standard deviation of C . For the purpose of this survey, the calorie-income elasticities^{10/} derived by FAO in connection with the world-wide commodities projections were adopted, and estimates of the standard deviation of the logarithm of income were derived principally from two sources^{11/} of data on income distribution.

The upper limit of calorie intake for most countries was taken as the mean plus three times the standard deviation where the mean was derived, as mentioned before, from the food balance sheets. In some cases where the upper limit calculated in this way turned out to be unreasonably high or low, because of a very large or very small estimated standard deviation, a regional value of the standard deviation was used.

^{8/} In the previous FAO study, Population, food supply and agricultural development, op.cit., this upper limit was assumed to be fixed at the same level for all countries.

^{9/} This function has been used by others, see for example the World Bank Staff Occasional Paper by Reutlinger and Selowsky, op.cit.

^{10/} These elasticities actually refer to total expenditure rather than income. Similarly, the data on income distribution mostly refer to expenditure survey.

^{11/} ILO, Household income and expenditure statistics, in which the data of frequency distribution in different size-intervals of income have been compiled; and IBRD, Size-distribution of income, S. Jain, a World Bank publication in which data are presented in the form of Lorenz distribution, together with the estimate of the Gini measure of concentration. Other sources, particularly the various household expenditure survey reports, were also utilized.

The regional standard deviation was also used for countries for which no income distribution data were available. However, in all cases the upper limit was taken at least at 4 500 calories.^{12/}

After a Beta-distribution was indirectly fitted for each country by using the method described above, the proportion of the population with calorie intake below the critical limit of 1.2 BMR was estimated by using the appropriate tables.^{13/}

The evidence of appropriateness of the calorie intake distribution following the assumed pattern lies in the fact that it gives a reasonable fit when directly fitted to the calorie intake distributions available for a few countries - particularly at the lower end of the distribution which is of principal interest. However, this problem requires further research.

Estimates of the number of people below the adopted critical minimum energy intake limit for a number of selected countries are shown in Appendix M. Table II.2.1 shows the regional summary. Figures are given for two periods, 1969-71 and 1972-74 and provide indication of change over time. It must be pointed out that the latter period includes years when food production fell in many countries due to adverse climatic conditions and figures for 1975-76, when available, will show some recovery.

Table II.2.1 Estimated number of persons with food intake below the critical minimum limit: developing regions (excluding Asian centrally planned economies)^{1/}

Region	Total Population		Percentage below 1.2 BMR		Total number below 1.2 BMR	
	1969-71	1972-74	1969-71	1972-74	1969-71	1972-74 (revised)
	Millions				Millions	
Africa	278	301	25	28	70	83
Far East	968	1 042	25	29	256	297
Latin America	279	302	16	15	44	46
Near East	167	182	18	16	31	20
MSA	954	1 027	27	30	255	307
Non-MSA	738	800	20	18	146	148
Developing countries	1 692	1 827	24	25	401	455

^{1/} The difference between figures given in this table for 1969-71 differs from those quoted in the document Assessment of the world food situation, present and future, presented at the World Food Conference 1974, largely due to revisions in the estimates of per caput food supplies as well as in the population figures.

^{12/} It was noted that in all cases the upper limit did not exceed 5 300 calories except in one case where it was 5 800.

^{13/} Pearson, E.S. and H.L. Johnson - Tables of the incomplete Beta-function, Cambridge University Press, 1968.

The relevant calculations indicate an order of magnitude of about 400 million as a conservative estimate of the number of persons undernourished in the developing countries, excluding the Asian centrally planned economies. The increase of more than 50 million between 1969-71 and 1972-74 largely reflects the population growth as well as the fluctuation in crop production and consequently in the food supply.

The largest population at risk from undernutrition is the Far East. Over 60% of the total number of malnourished in the developing countries are in this region, amounting to more than one quarter of its total population. While in Africa the proportion of the undernourished in total population is similar to that in the Far East, the actual numbers involved are less than one third in the Far East region. The situation in these two regions, particularly during the period 1972-74, was worse than in 1969-71, both in absolute numbers and in proportions of the undernourished population, although the difference in numbers in the two periods appears to be within the statistical margin of error of the estimates. In Africa it was clear that the proportion of the undernourished in total population increased significantly in the countries of the Sahel sub-region in 1972-74 (see Appendix H) - the period of the serious Sahelian drought.

In Latin America and the Near East, proportions of the population with probable energy intake below the critical minimum limit were lower than in the Far East and Africa. Moreover, the proportion in the Near East region at least appears to have slightly improved between 1969-71 and 1972-74.

More than 60% of the total estimated number of persons in the developing market economies at serious risk of undernutrition are in the MSA countries and most of these countries are situated in the Far East and Africa. Their situation appears to have worsened over the period under review.

The countries facing the most serious problems of inadequate food intake included some very large (by population size) countries which are listed below with the special country group classification assigned to those countries:

Bangladesh (LDC^{14/} and MSA)
 Brazil^{15/}
 Burma (MSA)
 Colombia
 Ethiopia (LDC and MSA)
 India (MSA)
 Indonesia
 Nigeria^{13/}
 Pakistan (MSA)
 Philippines
 Sudan (LDC and MSA)
 Tanzania (LDC and MSA)
 Zaire

^{14/} LDC stands for least developed country.

^{15/} Countries where the proportion of the malnourished to total population is low but their total number is large.

Smaller developing countries confronted by extreme nutritional difficulties for a major proportion of their populations included:

Bolivia
Chad (LDC and MSA)
El Salvador (MSA)
Maldives (LDC)
Mali (LDC and MSA)
Mauritania (LDC and MSA)
Niger (LDC and MSA)
Somalia (LDC and MSA)
Upper Volta (LDC and MSA)

It has been indicated earlier that recent data on the distribution of food consumption or supply by households are available for India, Brazil, the Philippines and Tunisia. These data are shown in Tables II.2.2 to II.2.5.

In the case of India, the frequency distribution tends to show an unexpectedly large proportion of households in high calorie supply groups and, thus, the average calorie supplies appear to be biased upward. Nevertheless, estimates of the proportion undernourished based on these data are shown in Table II.2.6, particularly as they throw light on the urban/rural and income differentials. The estimates for the Philippines are also shown in the same table. In the case of Brazil and Tunisia, additional data on requirements were also collected on a household basis. The use of these data for the assessment of undernutrition is under study in consultation with the countries concerned.

Table II.2.2 Distribution of households by daily calorie availability in India, 1971/72

Calorie availability per day per consumer unit	Rural		Urban	
	Percentage of households		Percentage of households	
	Percent	Cumulative	Percent	Cumulative
Less than 1 600	5.7	5.7	6.3	6.3
1 501 - 1 700	4.0	9.7	4.2	9.5
1 701 - 1 900	5.0	14.7	6.2	15.7
1 901 - 2 100	6.7	21.4	8.1	23.8
2 101 - 2 300	7.4	28.8	8.9	32.7
2 301 - 2 500	8.3	37.1	10.6	43.3
2 501 - 2 700	7.7	44.8	10.6	53.9
2 701 - 3 000	10.8	55.6	13.3	67.2
3 001 - 3 500	15.4	71.0	14.6	81.7
3 501 - 4 000	10.2	81.2	7.8	89.5
4 001 and over	18.8	100.0	10.5	100.0
All classes	100.0		100.0	

Table II.2.3 Distribution of households by daily calorie consumption in Brazil by regions, 1974/75

Calorie consumption per caput	Percentage of households					
	Rio de Janeiro region		South region		Northeast region	
	Urban	Rural	Urban	Rural	Urban	Rural
Less than 1 250	2.6	3.1	1.8	1.5	11.1	9.8
1 250 - 1 499	6.3	5.9	4.1	3.5	14.7	10.7
1 500 - 1 749	12.5	11.6	10.1	5.8	17.6	14.9
1 750 - 1 999	17.8	15.2	15.3	9.4	17.4	14.8
2 000 - 2 249	18.7	13.2	17.7	12.8	14.1	13.1
2 250 - 2 499	15.1	16.5	17.3	14.8	9.7	10.5
2 500 - 2 749	10.8	12.4	13.2	12.6	6.6	8.4
2 750 - 2 999	7.0	7.6	8.3	10.9	4.1	6.3
3 000 - 3 249	3.5	6.0	5.8	10.2	2.0	3.9
3 250 - 3 499	3.1	5.1	4.4	8.4	1.3	3.1
3 500 and over	2.6	3.4	2.0	10.1	1.5	4.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table II.2.4 Distribution of households by daily calorie intake in the Philippines,
1965

Calorie intake per consumer unit	Percentage of households	
	Urban	Rural
Less than 1 000	0.7	1.1
1 000 - 1 199	0.8	0.7
1 200 - 1 399	3.8	2.4
1 400 - 1 599	7.1	5.9
1 600 - 1 7	13.0	10.9
1 800 - 1 999	14.8	14.7
2 000 - 2 199	14.8	15.8
2 200 - 2 399	12.9	11.4
2 400 - 2 599	10.4	12.0
2 600 - 2 799	8.9	7.9
2 800 - 2 999	4.4	5.4
3 000 - 3 199	3.1	3.2
3 200 - 3 399	1.7	3.4
3 400 - 3 599	1.4	1.2
3 600 - 3 999	1.0	2.3
4 000 and more	1.2	1.7
Total	100.0	100.0

Table II.2.5 Distribution of households by calorie intake in Tunisia, 1975

Calorie intake per caput	Percentage of households		
	Total	Urban	Rural
Less than 1 000	0.7	1.0	0.4
1 000 - 1 499	7.0	8.6	5.3
1 500 - 1 999	22.0	26.5	17.4
2 000 - 2 499	29.8	31.0	28.5
2 500 - 2 999	17.8	15.2	20.4
3 000 - 3 499	10.3	8.7	11.9
3 500 - 3 999	5.8	4.7	6.8
4 000 - 4 499	2.6	1.9	3.4
4 500 - 4 999	1.9	1.1	2.8
5 000 - 5 499	1.1	0.5	1.8
5 500 and more	1.0	0.8	1.3
Total	100.0	100.0	100.0

Table II.2.6. Percentage of households in India and the Philippines with mean intake below 1.2 BNR, by location and income group

Countries	Location	Income group	Percentage below 1.2 BNR
India, 1971/72 (corrected for household size ^{1/})	All		17.4
	Urban		20.8
	Rural		16.6
	Urban	Less than 25 rupees	70.2
	Rural	" " " "	49.5
	Urban	25 to 43 rupees	26.9
	Rural	" " " "	8.9
	Urban	44 to 100 rupees	5.8
	Rural	" " " "	1.5
	Urban	More than 100 rupees	1.2
	Rural	" " " "	1.4
Philippines, 1970	All		29.7
	Urban		32.5
	Rural		28.1

^{1/} Since correction was made for differences in household size, these percentages refer to individuals rather than households

Clinical and anthropometric data in Table II.1.1 showed the estimated incidence of protein-energy malnutrition in children for some countries. Those figures indicate that in non-MSA countries 15 to 20% of children could be classified as being moderately or severely malnourished, while this percentage in some MSA countries was as high as 50.

In conclusion, it is necessary to stress the great need for countries to address themselves to building up and improving the required data base. The range of estimates shown from different sources indicate the considerable hazard inherent in giving undue precision to any one estimate. However, in the words used in the Assessment of the world food situation prepared for the World Food Conference "...even if the picture is shifting and blurred, a pattern emerges. Each strand of evidence...is far from incontrovertible, but together they point to a conclusion that the problem of food deficiency is extremely serious".^{16/}

^{16/} Assessment of the world food situation, present and future, United Nations World Conference, Rome, 5-16 November 1974.

The evidence on the incidence of child deaths partly due to malnutrition, clinical and anthropometric estimates of high percentages of living children classified as malnourished, and the estimated proportions of population below a "critical calorie intake limit", all point toward difficult tasks which the international community faces if incidence of malnutrition is to be drastically reduced.

Section 3. Estimation of "Calorie Deficit"

The foregoing review of recent trends (Part I) brings out the fact that the rate of growth of food production in the developing world during the early 1970s has slowed down to a point where it is barely higher than the growth rate of population. Per caput food supplies have risen but slowly, especially in areas where large increases are needed to close the calorie gap and improve nutrition.

Even to avoid any deterioration in the present unsatisfactory situation of per caput food availability, supplies need to rise faster than the mouths to be fed. Therefore, as a starting point, it would be relevant to assess the growth in food supplies which would be necessary in view of the demographic prospects. Appendices D to H provide projections of the total population and labour force and of agricultural population and the corresponding labour force up to the year 2000.¹⁷

According to the medium variant projections of total population prepared by the United Nations, while growth rate of the world population will be a little less than 2% per annum during 1975-2000, the growth rate in developing countries will be around 2.2% per annum. As a result, world population will rise from 3 968 million in 1975 to 6 257 million by the year 2000. Over 2 000 million of this increase will take place in the developing countries and less than 260 million in the developed countries.

In view of the expected trends in population, food supplies in developing countries must rise at least at the rate of 2.2% per annum to prevent any fall in the already low per caput food supplies. However, active population policies aimed at a faster reduction in fertility levels in the developing countries may reduce this minimal required growth rate. For example, the low variant population projections of the United Nations envisage a growth rate of 1.9% per annum. In any case it should be stressed that even with the increase in food supplies at these rates, the numbers of undernourished people may still increase from population growth.

¹⁷ For details regarding the methodology and assumptions underlying these projections, see, World population prospects as assessed in 1973, United Nations, New York, 1977; Labour force, 1950-2000, Methodological supplement, ILO, Geneva, 1977; and population and labour force projections for agricultural planning by L. Naiken and W. Schulte in Food Policy, Vol. 3, May 1976.

The size of the problem of undernutrition is formidable. Apart from estimating the number of people involved, it would be useful to attempt to estimate the amount of additional food required to reduce the proportion of the undernourished, in other words, to estimate the "calorie deficit". The size of the calorie deficit will depend upon how the problem of undernutrition is viewed and the measures proposed to be taken to alleviate it. A few possible approaches are indicated below. These, however, are only by way of illustration and in no sense exhaustive.

Approach 1. Raising average calorie supply to the requirement level

One measure of the "calorie gap" is based on the difference between the requirement per caput and supply. In 1972-74 there were as many as 72 developing countries (excluding Asian centrally planned economies) with per caput calorie supply below requirement level. The total deficit in calories (i.e., the difference between requirement and actual availability) in these 72 countries amounted to 320 000 million calories per day in 1972-74. This calorie deficit corresponds to an annual wheat equivalent of 37 million tons.^{2/} The breakdown of the estimated total by regions is shown in Table II.3.1.

Table II.3.1. Deficit in energy supply by region in terms of calorie and its wheat equivalents, 1972-74

Region	Total deficit	
	Thousand million calories/day	Million tons of wheat/year
Africa	73	8.5
Far East	213	24.6
Latin America	14	1.6
Near East	20	2.3
Developing market economies	320	37.0

It should be noted that this approach simply aims at a certain adequacy of total food supplies at the national level without confronting the problem of its unequal distribution within the country. Even if the average per caput availability were raised to the requirement level, there is no assurance that the problem of undernutrition would disappear. As a matter of fact, a number of developing countries (56) already had average supply levels equal to, or in excess of, their average requirement in 1972-74. Yet, many of them had a considerable proportion of their population with a calorie intake below 1.2 BMR, the critical limit adopted in the previous Section to estimate the number of the undernourished.

2/ Conversion from calories to tons of wheat equivalent was made on the basis that 315 calories equal 100 grams of wheat. This factor has been used by the Protein-Calorie Advisory Group of the United Nations system and quoted in PAG Bulletin, Vol. VII, Nos. 1-2, March-June 1969, p. 10.

Approach 2. Direct intervention programmes to raise food intake level of the undernourished

This approach estimates the quantities of food required to provide, through a direct intervention programme, every individual considered undernourished with food to bring his intake to at least the desired limits of 1.2 BMR or 1.5 BMR. Assumption is made that it is possible to identify those individuals who are in the undernourished category and to provide each of them with a certain amount of additional food. It is also assumed that an equal amount of additional food would be provided to each undernourished individual since it may not be possible in practice to give differing amounts to different individuals in accordance with their deficiencies. Such a direct intervention programme providing additional food to all undernourished individuals so as to ensure that their food consumption is raised to at least the 1.2 BMR or 1.5 BMR levels could be envisaged. The amount required to achieve this objective was calculated for each country and the results aggregated by region are shown in Table II.3.2.

Table II.3.2. Energy supply in terms of calorie and its wheat equivalents required to raise the intake of the undernourished to at least 1.2 BMR and to 1.5 BMR, by region, 1972-74

Region	Total deficit			
	Desired level at least 1.2 BMR		Desired level at least 1.5 BMR	
	Thousand million calories/day	Million tons of wheat/year	Thousand million calories/day	Million tons of wheat/year
Africa	61	7.0	92	10.7
Far East	209	24.3	320	37.1
Latin America	34	3.9	51	5.9
Near East	22	2.6	33	3.9
Developing market economies	326	37.81/	496	57.6

1/ Although this figure is almost the same as that given in Table II.3.1, there is no obvious relationship between the two calculations, particularly since the first approach involved calculations for only those countries with per caput calorie supplies below requirement.

Approach 3. Increase in food supplies combined with measures to reduce inequalities in the distribution

The calculation of the "calorie deficit" on the basis of either the difference between average per caput supplies and requirements at the national level, or the difference between the intake of the undernourished individuals and a desired limit of intake, provide indications of the dimension of the food problem at only one point in time (i.e., 1972-74 in the above calculations). However, from a long-term point of view, it is necessary to analyse the problem in a dynamic setting of rising population, growth in food supplies and a reduction in the inequality of food distribution. Hence, under this approach it is assumed that countries with undernutrition problems will not only increase the available food supplies but also pursue policies aimed at reducing the inequalities in their distribution. Policies to improve food distribution could involve increasing the purchasing power of the poor by provision of adequate productive employment, land reforms, improving food marketing and distribution systems, planning greater production of cheaper foodstuffs of high calorific values, and timely and effective assistance to rural landless and subsistence farmers, particularly in times of poor harvest, etc.

In this approach, it is assumed that the objective is to reduce the percentage of the undernourished as defined in this survey to not more than 5% of total population by the year 1990. The mathematical procedure used for estimating the additional food requirements is similar to that explained in Section 2. This procedure, in essence, consists of estimating the levels to which average food supplies should be raised corresponding to different degrees of inequality in food distribution as measured by standard deviation. Table II.3.3 gives the average per caput calorie supply needed at different degrees of inequality of distribution as measured by standard deviations in order to achieve the objective of reducing the proportion of the undernourished to 5% of the total population.

Table II.3.3. Average calorie supply needed at different standard deviations in a typical^{1/} country to limit the proportion of the undernourished to 5% of the population

Average calorie supply	Standard deviation (calories)
<u>Per caput per day</u>	
3 000	730
2 800	700
2 680	650
2 500	600
2 270	430

^{1/} A typical country for the purpose of these calculations was taken as one with a calorie intake range of 800 to 4 800 calories per caput and the critical limit of 1.2 BMR at 1 600 calories per caput.

In many developing countries the existing inequalities of food distribution are relatively large, corresponding to a standard deviation of more than 700 calories. The implication from the above table is that unless steps are taken to reduce the existing inequalities of food distribution (i.e., to reduce the standard deviation to a level below 700 calories), the proportion of the under-nourished in these countries cannot be reduced to less than 5% of the population without increasing the average supply to about 3 000 calories per caput per day from the 1972-74 level of 2 180. It is unlikely that many developing countries would be able to achieve an average per caput food supply of 3 000 calories per day within the medium-term future. Thus, it is almost imperative to reduce the extent of the existing inequalities in the food distribution, while taking measures to increase food supplies. Obviously, the greater the extent to which inequalities in distribution are reduced, the lesser would be the required increase in the per caput food supplies to achieve the desired objective.

An attempt to quantify this approach of simultaneous increase in food supplies with a reduction in the degree of inequality of distribution is undertaken below. For this purpose, it is assumed that (i) the average per caput per day supply of calories would be raised to at least 2 500 calories^{3/} by the year 1990 for all developing countries where it was below this level in 1972-74, (ii) the standard deviation of the distribution of the food supplies would be reduced to 600 calories by that time; and (iii) the objective is to reduce the proportion of undernourished on the basis of the criterion followed so far to 5% or less.

Table II.3.4 shows the annual growth rates and the absolute increase in food supply in wheat equivalent that would be required if these objectives are to be achieved, taking into account the population growth expected during the period. The table shows estimates for the 34 countries with population greater than 5 million, grouped into MSA and non-MSA. The base for extrapolation of required growth rates was 1972-74 average and the population growth rates underlying the calculations are based on the United Nations medium variant population projections.

Many countries, particularly MSA countries, would need to achieve growth rates in food supply of over 4% per annum between 1972-74 and 1990 if the average food supply is to reach 2 500 calories per caput per day by that year. The additional calories and the corresponding wheat equivalents that would be required were estimated for 92 developing MSA and non-MSA countries in the developing market economies that had an average calorie supply of less than 2 500 in 1972-74. These calculations indicate that in wheat equivalent these countries would need to increase the total of their food supply by approximately 363 million tons for the period up to the year 1990, or at an average annual increase of about 21 million tons. It should be noted that these calculations relate to food supply and not necessarily to food production.

^{3/} The figure of 2 500 calories was chosen since nearly all the MSA countries and about two thirds of the non-MSA countries had per caput calorie supplies less than 2 500 during 1972-74.

Table II.3.4. Average annual growth rate in energy supply required during the period 1972-74 to 1990 and the implied amount in wheat equivalent for selected MSA and non-MSA developing countries

Countries	Average annual growth rate in energy supply	Absolute increase in wheat equivalent	
		Average per year	Total increase during period 1972-74 to 1990
MSA			
Afghanistan	4.0	240.0	4 080.5
Bangladesh	4.3	975.3	16 580.5
Burma	3.4	326.5	5 552.6
Cameroon	2.6	54.5	927.9
Ethiopia	3.9	338.5	5 754.2
Ghana	3.6	121.2	2 060.7
Guatemala	4.3	82.9	1 408.8
India	3.9	7 084.7	120 439.1
Madagascar	3.5	96.5	1 640.1
Mali	4.8	79.1	1 343.9
Mozambique	4.0	113.9	1 936.7
Nepal	3.8	146.9	2 497.9
Pakistan	4.2	965.6	16 415.7
Sri Lanka	3.0	126.1	2 143.9
Sudan	4.4	259.3	4 407.4
Tanzania	4.7	227.2	3 861.6
Uganda	4.0	150.5	3 861.6
Upper Volta	4.7	79.6	1 352.6
Non-MSA			
Algeria	4.5	250.5	4 259.2
Angola	4.1	80.7	1 372.4
Bolivia	4.4	70.6	1 200.8
Colombia	3.9	328.4	5 583.4
Ecuador	4.2	97.1	1 650.8
Indonesia	3.8	1 560.1	26 521.1
Iran	3.5	393.0	6 680.6
Iraq	3.7	142.8	2 427.4
Nigeria	4.1	838.5	14 253.8
Peru	3.3	170.5	2 899.3
Philippines	4.6	641.3	10 901.3
Rhodesia	3.6	81.8	1 390.7
Saudi Arabia	3.3	101.3	1 722.3
Tunisia	3.0	58.1	988.1
Venezuela	3.1	130.3	2 214.8
Zaire	4.6	333.9	5 676.3

As can be seen from Table II.3.5 nearly all the MSA countries and about two thirds of the non-MSA countries had per caput calorie supplies less than 2 000 during 1972-74. In wheat equivalent, these MSA countries need to increase the total of their food supply by approximately 210 million tons for the period up to the year 1990, which reduces to an average annual increase of about 12 million tons. If the non-MSA countries are also included, the corresponding totals are 363 and 21 million tons respectively.

Table II.3.5. Number of MSA and non-MSA countries in the developing market economies classified according to daily per caput calorie supply levels, 1972-74

	Per caput calorie supply (kilocalories)		
	< 2 500	> 2 500	
MSA	42	2	44
Non-MSA	50	29	79
All developing market economies	92	31	123

This ambitious effort, in order to reduce the proportion of the undernourished population to 5% assumes that, as mentioned earlier, policies are pursued at the same time which will involve a major reduction in their supply inequalities within the country. Greater uniformity of distribution is a *sine qua non* if the percentage of undernutrition is to be brought to a sufficiently low level.

APPENDIX A
Classification of Countries

(i) Economic Classes and Regions

Developed Countries

Developed Market Economies

North America: Canada, United States.

Western Europe: Andorra, Austria, Belgium-Luxembourg, Denmark, Faeroe Islands, Finland, France, Federal Republic of Germany (incl. West Berlin), Gibraltar, Greece, Holy See, Iceland, Ireland, Italy, Liechtenstein, Malta, Monaco, Netherlands, Norway, Portugal (incl. Azores and Madeira), San Marino, Spain, Sweden, Switzerland, United Kingdom (incl. Channel Islands and Isle of Man), Yugoslavia.

Oceania: Australia, New Zealand.

Other developed Market Economies: Israel, Japan, South Africa.

Eastern Europe and USSR: Albania, Bulgaria, Czechoslovakia, German Democratic Republic (incl. East Berlin), Hungary, Poland, Romania, USSR.

Developing Countries

Developing Market Economies

Africa: Algeria, Angola, Benin, Botswana, British Indian Ocean Territory, Burundi, Cameroon, Cape Verde, Central African Empire, Chad, Comoros, Congo, Djibouti, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Reunion, Rhodesia, Rwanda, St. Helena, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, Spanish North Africa, Swaziland, Tanzania, Togo, Tunisia, Uganda, Upper Volta, Western Sahara, Zaire, Zambia,

Latin America: Antigua, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador (incl. Galapagos Islands), El Salvador, Falkland Islands (Malvinas), French Guinea, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Panama Canal Zone, Paraguay, Peru, Puerto Rico, St. Kitts-Nevis-Anguilla, St. Lucia, St. Vincent, Surinam, Trinidad and Tobago, Turks and Caicos Islands, Uruguay, Venezuela, Virgin Islands (U.K.), Virgin Islands (U.S.).

Near East: Africa: Egypt, Libya, Sudan. Asia: Afghanistan, Bahrain, Cyprus, Gaza Strip (Palestine), Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, Yemen Arab Republic, Democratic Yemen.

Far East: Bangladesh, Bhutan, Brunei, Burma, East Timor, Hong Kong, India, Indonesia, Republic of Korea, Lao, Macau, Malaysia (Peninsular Malaysia, Sabah, Sarawak), Maldives, Nepal, Pakistan, Philippines, Sikkim, Singapore, Sri Lanka, Thailand.

APPENDIX A (Contd.)

Other developing Market Economies: America; Bermuda, Greenland, St Pierre and Miquelon. Oceania: American Samoa, Canton and Enderbury Islands, Christmas Island (Aust.), Cocos (Keeling) Islands, Cook Islands, Fiji, French Polynesia, Gilbert Islands, Guam, Johnston Island, Midway Islands, Nauru, New Caledonia, New Hebrides, Niue Island, Norfolk Island, Pacific Islands (Trust Territ.), Papua New Guinea, Pitcairn Island, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Wake Island, Wallis and Futuna Islands.

Asian Centrally Planned Economies: China, Democratic Kampuchea, Democratic People's Republic of Korea, Mongolia, Viet Nam.

(ii) Developing Market Economies Classified as MSA (Most Seriously Affected) and Non-MSA Countries.

MSA Countries: Afghanistan, Bangladesh, Benin, Burma, Burundi, Cameroon, Cape Verde, Central African Empire, Chad, Egypt, El Salvador, Ethiopia, Gambia, Ghana, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Ivory Coast, Kenya, Lao, Lesotho, Madagascar, Mali, Mauritania, Mozambique, Nepal, Niger, Pakistan, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Sri Lanka, Tanzania, Uganda, Upper Volta, Samoa, Yemen Arab Republic, Democratic Yemen.

Non-MSA Countries: Algeria, American Samoa, Angola, Antigua, Argentina, Bahamas, Bahrain, Barbados, Bermuda, Bhutan, Bolivia, Botswana, Brazil, Belize, British Indian Ocean Territory, Brunei, Canton and Enderbury Islands, Cayman Islands, Chile, Christmas Island (Aust.), Cocos (Keeling) Islands, Colombia, Comoros, Congo, Cook Islands, Costa Rica, Cuba, Cyprus, Djibouti, Dominica, Dominican Republic, East Timor, Ecuador (Incl. Galapagos Islands), Equatorial Guinea, Falkland Islands (Malvinas), Fiji, French Guyana, French Polynesia, Gabon, Gaza Strip (Palestine), Gilbert Islands, Greenland, Grenada, Guadeloupe, Guam, Hong Kong, Indonesia, Iran, Iraq, Jamaica, Johnston Island, Jordan, Republic of Korea, Kuwait, Lebanon, Liberia, Libya, Macau, Malawi, Malaysia (Peninsular Malaysia, Sabah, Sarawak), Maldives, Martinique, Mauritius, Mexico, Midway Islands, Montserrat, Morocco, Namibia, Nauru, Netherlands Antilles, New Caledonia, New Hebrides, Nicaragua, Nigeria, Niue Island, Norfolk Island, Oman, Pacific Islands (Trust Territ.), Panama, Panama Canal Zone, Papua New Guinea, Paraguay, Peru, Philippines, Pitcairn Island, Puerto Rico, Qatar, Rhodesia, Reunion, St Helena, St. Kitts-Nevis-Anguilla, St. Lucia, St. Pierre and Miquelon, St. Vincent, São Tomé and Príncipe, Saudi Arabia, Seychelles, Sikkim, Singapore, Solomon Islands, Spanish North Africa, Surinam, Swaziland, Syria, Thailand, Togo, Tokelau, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turks and Caicos Islands, Tuvalu, United Arab Emirates, Uruguay, Venezuela, Virgin Islands (U.K.), Virgin Islands (U.S.), Wake Island, Wallis and Futuna Islands, Western Sahara, Zaire, Zambia.

APPENDIX B

Rates of Growth of Population and Food, Agricultural and Cereal Production,
1961-65/70 and 1970/76 for Individual Countries

	Population Period*	Production			Per Caput Production		
		Agricultural Food	Agricultural Cereals		Food	Agricultural	Cereals
<u>Developing Countries</u>							
Afghanistan	1	2.3	1.3	1.3	0.6	-1.0	-0.9
	2	2.6	4.5	4.7	5.7	1.9	2.0
Algeria	1	3.4	2.6	2.7	5.2	-0.8	-0.6
	2	3.2	2.5	2.5	4.5	-0.7	-0.7
Angola	1	1.9	2.7	2.3	1.5	0.8	0.5
	2	2.3	-2	-4.2	0.3	-2.4	-6.4
Antigua	1	2.4	-10.1	-10.0	-	-12.5	-12.4
	2	0.8	-2.4	-2.0	-	-3.2	-2.7
Argentina	1	1.4	2.1	1.9	1.4	0.7	0.5
	2	1.3	3.1	3.0	4.5	1.8	1.6
Bahamas	1	4.4	2.4	2.4	-	-1.9	-1.9
	2	2.8	6.1	6.1	-	3.2	3.2
Barbados	1	0.3	-0.3	-0.3	16.3	-0.5	-0.6
	2	0.5	-4.4	-4.3	4.9	-4.9	-4.8
Bangladesh	1	2.9	3.0	2.9	2.6	0.2	-
	2	1.7	2.4	1.9	3.1	0.7	0.2
Benin	1	2.5	4.4	4.9	0.2	1.9	2.3
	2	2.7	-2.6	-2.6	4.0	-5.2	-5.2
Bhutan	1	2.1	2.4	2.5	2.2	0.3	0.4
	2	2.4	2.4	2.5	2.3	0.1	0.1
Bolivia	1	2.4	3.7	3.8	2.2	1.3	1.4
	2	2.5	5.2	5.4	4.3	2.6	2.8
Botswana	1	2.1	2.3	2.2	-7.8	0.2	0.1
	2	2.3	4.8	4.8	30.8	2.4	2.4
Brazil	1	2.9	4.7	3.7	4.8	1.8	0.8
	2	2.9	4.7	3.8	4.8	1.8	0.9
Belize	1	2.6	7.0	7.0	19.1	4.3	4.3
	2	3.1	2.5	2.5	-2.9	-0.5	-0.5
Brunei	1	3.5	6.9	1.6	7.0	3.4	-1.8
	2	1.9	9.6	10.1	-2.2	7.6	8.2
Burma	1	2.3	1.7	1.7	1.3	-0.6	-0.5
	2	2.4	2.3	2.4	2.8	-0.1	-
Burundi	1	1.1	2.2	2.4	3.0	1.1	1.3
	2	2.4	2.1	1.9	4.0	-0.4	-0.6

* 1 refers to the period 1961-65/70 and

2 refers to the period 1970-76

APPENDIX B (Contd.)

	Population		Production			Per Caput Production		
	Period*	Food	Agricultural		Cereals	Food	Agricultural	
			Cereals	Agricultural			Cereals	Agricultural
Cameroon	1	1.8	4.0	4.3	1.7	2.1	2.5	-0.1
	2	1.9	1.2	1.4	2.8	-0.7	-0.4	0.9
Cape Verde	1	2.9	-4.3	-4.4	-34.9	-7.2	-7.3	-37.8
	2	1.9	6.8	6.7	54.6	4.8	4.8	52.7
Central African Rep.	1	2.0	2.0	2.8	5.1	-	0.7	3.1
	2	2.1	1.0	0.7	-2.8	-1.1	-1.4	-4.8
Chad	1	2.0	-0.3	-	-1.0	-2.3	-2.0	-3.0
	2	2.0	-1.0	0.7	-1.9	-2.9	-1.3	-3.9
Chile	1	2.0	2.5	2.4	1.7	0.5	0.4	-0.4
	2	1.8	0.1	-	-5.0	-1.7	-1.8	-6.7
China	1	1.7	2.7	2.8	3.1	1.0	1.1	1.4
	2	1.7	2.5	2.6	2.6	0.8	0.9	0.9
Colombia	1	3.4	3.2	3.2	2.0	-0.2	-0.1	-1.3
	2	3.2	3.9	3.5	9.0	0.7	0.2	5.8
Comoro Is.	1	2.2	1.9	1.6	-0.3	-0.3	-0.6	-2.4
	2	2.5	2.5	2.4	6.8	-	-0.2	4.2
Congo	1	2.1	3.8	3.7	-2.8	1.6	1.6	-5.0
	2	2.5	1.4	1.6	23.3	-1.0	-0.8	20.8
Costa Rica	1	3.2	7.2	6.7	-	3.9	3.4	-3.1
	2	2.8	3.8	3.5	10.5	1.0	0.7	7.7
Cuba	1	1.9	3.9	3.6	5.4	2.0	1.6	3.4
	2	2.1	-0.1	-0.1	4.0	-2.1	-2.2	1.9
Cyprus	1	1.1	7.3	7.1	-2.0	6.1	5.9	-3.1
	2	1.2	-4.5	-4.4	2.0	-5.7	-5.6	0.8
Dominica	1	1.8	2.1	2.1	1.4	0.4	0.4	-0.3
	2	1.1	-0.7	-0.7	3.8	-1.8	-1.8	2.8
Dominican Republic	1	3.2	3.2	2.7	4.9	-	-0.5	1.6
	2	3.3	2.5	2.5	5.0	-0.8	-0.9	1.7
Ecuador	1	3.4	4.1	3.9	2.5	0.7	0.5	-0.8
	2	3.3	2.5	2.9	4.7	-0.8	-0.4	1.4
Egypt	1	2.5	3.5	3.3	3.3	1.0	0.7	0.8
	2	2.4	2.1	1.4	1.4	-0.2	-1.0	-1.0
El Salvador	1	3.5	3.4	1.4	7.1	-0.1	-2.0	3.5
	2	3.2	4.4	5.1	3.9	1.2	1.9	0.7
Ethiopia	1	2.2	2.1	2.2	2.4	-0.1	-	0.2
	2	2.4	-1.4	-0.8	-3.3	-3.7	-3.1	-5.6
Fiji	1	2.5	3.2	3.2	2.9	0.7	0.7	0.4
	2	2.1	-2.5	-2.5	0.3	-4.5	-4.5	-1.8
French Polynesia	1	3.5	-0.3	-0.4	-	-3.7	-3.9	-
	2	3.2	-1.4	-1.4	-	-4.5	-4.6	-

APPENDIX B (Contd.)

	Period*	Population			Production			Per Caput Production		
			Food	Agricultural	Cereals	Food	Agricultural	Cereals		
Gabon	1	1.1	2.5	2.4	-1.2	1.3	1.2	-2.3		
	2	1.0	1.4	1.4	12.4	0.5	0.4	11.4		
Gambia	1	1.8	1.4	1.4	1.2	-0.4	-0.4	-0.5		
	2	1.9	5.1	5.1	3.2	3.1	3.1	1.2		
Ghana	1	2.3	1.8	1.8	6.8	-0.5	-0.5	4.4		
	2	2.8	-1.1	-	-1.1	-2.8	-2.7	-3.8		
Grenada	1	0.5	2.5	2.4	-4.7	2.0	1.9	-5.2		
	2	0.4	-0.7	-0.7	4.0	-1.1	-1.1	3.6		
Guadeloupe	1	1.8	-0.7	-0.6	-5.8	-2.5	-2.4	-7.6		
	2	1.6	-5.2	-5.3	1.2	-6.7	-6.9	-0.5		
Guatemala	1	2.9	4.7	4.6	4.4	1.7	1.6	1.5		
	2	3.0	4.1	4.5	-0.7	1.1	1.5	-3.6		
Guinea	1	2.2	2.7	2.5	4.3	0.5	0.3	2.1		
	2	2.4	-0.3	-0.4	-2.2	-2.6	-2.8	-4.5		
Guinea Bissau	1	-0.5	-2.4	-2.4	-5.3	-2.9	-2.9	-5.8		
	2	1.6	1.4	1.4	2.7	-0.2	-0.2	1.1		
Guyana	1	2.3	1.7	1.7	-3.2	-0.6	-0.6	-5.4		
	2	2.2	1.8	1.8	6.8	-0.4	-0.4	4.5		
Haiti	1	1.5	1.7	1.2	1.5	0.2	-0.3	-		
	2	1.5	1.9	2.0	1.7	0.4	0.5	0.2		
Honduras	1	3.0	5.4	5.0	-	2.4	1.9	-2.9		
	2	3.6	2.1	2.8	3.3	-1.4	-0.7	-0.2		
Hong Kong	1	1.9	-3.4	-3.4	-1.1	-5.3	-5.3	-3.0		
	2	1.4	-4.6	-4.6	-23.2	-6.0	-6.0	-24.6		
India	1	2.4	3.2	3.0	4.3	0.8	0.6	1.9		
	2	2.5	2.1	2.1	2.1	-0.4	-0.4	-0.4		
Indonesia	1	2.6	3.8	3.7	6.0	1.2	1.1	3.3		
	2	2.6	3.7	3.3	3.0	1.0	0.6	0.4		
Iran	1	2.8	4.6	4.5	4.1	1.7	1.7	1.3		
	2	3.0	4.8	4.5	7.4	1.7	1.4	4.4		
Iraq	1	3.2	3.8	3.9	5.0	0.5	0.7	1.7		
	2	3.4	-0.2	-0.5	-3.6	-3.5	-3.8	-6.9		
Ivory Coast	1	2.3	4.7	4.9	4.2	2.3	2.5	1.8		
	2	2.5	4.9	3.8	5.5	2.4	1.3	2.9		
Jamaica	1	1.4	0.3	0.2	-8.2	-1.1	-1.2	-9.6		
	2	1.5	0.6	0.6	25.8	-0.9	-0.9	23.4		
Jordan	1	3.0	-10.4	-9.8	-12.3	-13.4	-12.8	-15.3		
	2	3.4	0.4	0.5	-4.8	-3.0	-2.8	-6.2		
Kenya	1	3.3	3.6	3.8	5.5	0.2	0.4	2.1		
	2	3.3	0.2	1.1	-0.8	-3.1	-2.2	-4.0		
Kampuchea	1	2.8	4.7	4.2	4.8	1.8	1.3	2.0		
	2	2.8	-10.5	-10.1	-14.9	-13.3	-12.9	-17.7		
Korea, Dem.	1	2.8	2.5	2.5	2.6	-0.2	-0.3	-0.2		
	2	2.7	4.8	4.7	5.0	2.1	2.0	2.3		

APPENDIX B (Contd.)

	Population		Production			Per Caput Production		
	Period*		Food	Agricultural	Cereals	Food	Agricultural	Cereals
Korea, Rep.	1	2.4	4.0	4.2	2.1	1.6	1.8	-0.3
	2	2.0	3.3	3.7	3.7	1.3	1.6	1.6
Lao	1	2.2	5.9	5.9	5.7	3.6	3.6	3.4
	2	2.2	1.7	1.6	0.6	-0.5	-0.6	-1.6
Lebanon	1	2.8	2.4	2.5	-9.9	-0.4	-0.3	-12.7
	2	3.1	2.8	2.9	0.9	-0.3	-0.1	-2.1
Lesotho	1	1.7	1.4	1.5	-1.1	-0.3	-0.3	-2.8
	2	2.0	1.2	0.9	-2.3	-0.8	-1.1	-4.2
Liberia	1	2.0	0.8	3.4	-2.9	-1.2	1.3	-4.8
	2	2.3	4.5	1.9	11.5	2.1	-0.4	9.2
Libya	1	3.7	0.8	1.1	-2.1	-2.8	-2.5	-5.8
	2	3.1	10.2	9.5	27.8	7.1	6.3	24.7
Macau	1	2.7	7.3	7.3	-	4.6	4.6	-
	2	1.7	10.7	10.7	-	9.0	9.0	-
Madagascar	1	2.6	2.8	2.5	2.6	0.2	-0.1	-
	2	3.0	1.2	1.6	0.1	-1.8	-1.3	-2.8
Malawi	1	2.3	3.7	3.6	2.3	1.4	1.3	-
	2	2.4	2.7	3.7	1.9	0.3	1.2	-0.5
Malaysia Peninsular	1	2.8	5.7	6.4	6.2	2.9	3.6	3.4
	2	2.8	6.8	5.1	2.7	3.9	2.3	-0.1
Sabah	1	3.6	6.7	5.6	3.3	3.0	1.9	-0.3
	2	3.8	12.4	9.5	5.1	8.6	5.7	1.3
Sarawak	1	3.2	4.6	-0.2	5.5	1.3	-3.3	2.2
	2	3.7	3.0	5.2	1.7	-0.7	1.4	-2.0
Maldives	1	1.7	1.9	1.9	1.7	0.2	0.2	-
	2	2.0	1.9	1.9	-	-0.1	-0.1	-1.9
Mali	1	2.1	1.8	2.2	0.1	-0.3	0.1	-2.0
	2	2.5	-0.3	0.4	2.1	-2.7	-2.0	-0.3
Martinique	1	1.9	-1.0	-1.4	-	-2.9	-3.2	-
	2	1.4	2.2	2.2	-	0.8	0.8	-
Mauritania	1	2.0	1.8	1.8	0.1	-0.3	-0.3	-1.9
	2	2.0	-3.9	-3.9	-6.2	-5.8	-5.8	-8.2
Mauritius	1	1.9	0.7	1.1	-	-1.2	-0.8	-
	2	1.8	0.8	0.8	-	-0.9	-0.9	-
Mexico	1	3.3	3.9	2.9	5.4	0.6	-0.4	2.1
	2	3.3	2.5	1.9	1.7	-0.8	-1.4	-1.5
Mongolia	1	3.1	-0.5	-0.4	-5.4	-3.5	-3.4	-8.5
	2	3.0	3.7	3.6	6.8	0.7	0.6	3.7
Morocco	1	2.7	5.1	5.0	7.5	2.3	2.2	4.7
	2	3.0	.8	1.0	-	-2.1	-2.0	-2.9
Mozambique	1	2.3	3.5	3.7	-0.1	1.2	1.4	-2.3
	2	2.3	-0.9	-1.4	0.9	-3.1	-3.6	-1.4
Namibia	1	4.3	3.1	2.8	4.5	-1.1	-1.4	0.2
	2	2.9	4.5	4.6	1.3	1.6	1.6	-1.6

APPENDIX B (Contd.)

	Period*	Population		Production			Per Caput Production		
				Food	Agricul-tural	Cereals	Food	Agricul-tural	Cereals
Nepal	1	2.1	1.4	1.5	1.3	-0.6	-0.6	-0.7	
	2	2.3	1.8	1.7	1.7	-0.5	-0.6	-0.5	
Netherlands Antilles	1	1.4	2.1	2.1	3.3	0.7	0.7	1.9	
	2	1.8	20.4	20.4	3.0	18.6	18.6	1.2	
New Caledonia	1	3.3	-0.4	-1.3	-3.6	-3.6	-4.5	-6.9	
	2	2.8	-1.5	-0.8	-1.6	-4.2	-3.5	-4.4	
New Hebrides	1	2.6	1.5	1.4	3.6	-1.1	-1.1	0.9	
	2	2.8	4.7	4.7	-0.7	1.9	1.9	-3.4	
Nicaragua	1	2.9	5.1	3.6	6.8	2.1	0.6	3.8	
	2	3.3	2.2	4.4	-0.7	-1.0	1.1	-3.9	
Niger	1	3.0	1.4	1.4	0.3	-1.6	-1.5	-2.6	
	2	2.7	-1.1	-1.0	1.0	-3.7	-3.6	-1.7	
Nigeria	1	2.5	2.1	2.1	1.5	-0.4	-0.4	-0.9	
	2	2.7	-0.5	-0.4	1.0	-3.1	-3.1	-1.7	
Pakistan	1	2.8	6.2	6.0	9.1	3.4	3.1	6.3	
	2	3.2	2.9	2.0	3.1	-0.2	-1.1	-0.1	
Panama	1	3.0	6.2	6.1	1.1	3.2	3.1	-1.8	
	2	2.8	2.4	2.4	1.8	-0.4	-0.4	-1.0	
Papua New Guinea	1	2.3	2.3	2.6	11.0	-	0.2	8.7	
	2	2.4	2.3	2.5	2.3	-0.1	0.1	-0.1	
Paraguay	1	2.6	3.2	3.2	7.1	0.5	0.6	4.4	
	2	2.9	1.7	3.4	6.0	-1.1	0.5	3.0	
Peru	1	2.9	2.8	1.9	2.3	-0.1	-1.0	-0.6	
	2	3.0	2.7	2.0	-	-0.2	-0.9	-2.9	
Philippines	1	3.2	3.3	3.0	5.1	0.1	-0.2	1.8	
	2	3.4	5.2	5.2	4.9	1.8	1.8	1.4	
Rhodesia	1	3.9	2.5	0.7	0.5	-1.4	-3.2	-3.3	
	2	3.4	4.1	4.2	7.9	0.7	0.8	4.5	
Reunion	1	2.7	0.7	0.7	-10.0	-1.9	-2.0	-7.3	
	2	2.3	3.1	3.1	7.6	0.8	0.8	5.2	
Rwanda	1	2.9	5.6	5.8	2.0	2.6	2.8	-0.9	
	2	2.7	2.8	3.2	-0.2	0.1	0.5	-2.9	
St Lucia	1	0.9	-	-	8.9	-0.9	-0.9	-8.0	
	2	1.4	2.4	2.4	-	1.0	1.0	-1.4	
St Vincent	1	1.0	0.8	0.7	2.9	-0.2	-0.3	1.9	
	2	1.1	-0.5	-0.5	3.8	-1.6	-1.6	2.7	
Sao Tome	1	1.4	-1.2	-1.3	-	-2.6	-2.7	-	
	2	1.6	-2.3	-2.4	-	-3.8	-3.9	-	
Samoa	1	2.8	-1.3	-1.0	-	-4.0	-3.7	-	
	2	3.1	3.6	3.7	-	0.4	0.5	-	
Saudi Arabia	1	2.7	2.5	2.5	1.8	-0.2	-0.2	-0.9	
	2	3.0	4.6	4.6	6.5	1.6	1.6	3.5	

APPENDIX B (Contd.)

	Population		Production			Per Caput Production		
	Period*		Food	Agricultural	Cereals	Food	Agricultural	Cereals
Senegal	1	2.4	-2.4	-2.3	-	-4.7	-4.6	-2.3
	2	2.4	9.1	9.2	7.0	6.7	6.7	4.5
Sierra Leone	1	2.2	3.0	3.0	4.7	0.8	0.8	2.4
	2	2.5	2.0	1.8	3.6	-0.4	-0.6	1.1
Singapore	1	2.1	7.6	7.2	-	5.4	5.0	-
	2	1.6	5.1	5.0	-	3.5	3.3	-
Solomon Is.	1	2.7	0.9	0.9	-	-1.8	-1.8	-
	2	2.8	1.9	1.9	-	-0.8	-0.8	-
Somalia	1	2.2	2.8	2.8	0.2	0.5	0.5	-2.0
	2	2.6	-0.6	-0.6	0.3	-3.2	-3.1	-2.3
Sri Lanka	1	2.4	3.8	2.2	7.8	1.4	-0.1	5.3
	2	2.2	2.2	0.3	-2.9	-	-1.8	-5.0
Sudan	1	2.9	3.9	4.3	4.4	0.9	1.3	1.5
	2	3.1	5.4	4.1	5.4	2.2	1.0	2.2
Surinam	1	2.4	8.0	7.9	7.6	5.5	5.4	5.1
	2	2.7	1.9	1.9	4.7	-0.7	-0.7	2.0
Swaziland	1	2.5	5.8	5.7	7.5	3.2	3.1	4.9
	2	2.8	4.6	5.0	3.2	1.8	2.2	0.4
Syria	1	3.2	-0.6	-0.4	-4.8	-3.7	-3.5	-8.0
	2	3.1	11.4	9.0	20.7	8.3	5.8	17.6
Tanzania	1	2.8	3.5	3.1	3.5	0.6	0.2	0.6
	2	3.1	5.9	4.5	14.4	2.8	1.4	11.3
Thailand	1	3.1	3.7	3.7	2.9	0.6	0.6	-0.2
	2	3.3	4.3	4.0	2.9	1.0	0.6	-0.4
Togo	1	3.0	2.3	2.4	4.1	-0.6	-0.5	1.1
	2	2.8	-7.5	-6.6	-4.7	-9.4	-9.1	-7.5
Tonga	1	3.7	0.9	0.9	-	-2.7	-3.7	-
	2	3.2	4.0	4.0	-	0.7	0.7	-
Trinidad & Tobago	1	1.1	2.2	2.1	-1.1	1.1	1.1	-2.2
	2	1.1	-1.5	-1.5	14.2	-2.6	-2.6	13.1
Tunisia	1	2.1	1.3	1.4	-1.0	-0.7	-0.6	-3.0
	2	2.3	6.5	6.4	7.9	4.1	4.0	5.5
Turkey	1	2.5	3.2	3.3	1.6	0.6	0.8	-0.9
	2	2.5	4.4	4.5	4.9	1.8	1.9	2.3
Uganda	1	2.7	2.7	3.7	7.6	-	1.1	4.9
	2	3.0	1.2	0.6	3.6	-1.7	-2.3	0.6
Upper Volta	1	2.1	2.0	2.4	1.5	-0.1	0.3	-0.5
	2	2.3	1.6	1.6	4.9	-0.7	-0.7	2.6
Uruguay	1	1.1	2.5	1.9	2.0	1.4	0.7	0.9
	2	1.0	2.0	0.2	7.8	1.0	-0.8	6.7
Venezuela	1	3.1	6.0	5.7	6.7	2.8	2.5	3.5
	2	3.0	4.5	4.5	4.3	1.5	1.5	1.3

APPENDIX B (Contd.)

	Period*	Population		Production			Per Caput Production		
		Food	Agricultural	Cereals	Food	Agricultural	Cereals		
Vietnam	1	2.5	0.9	0.7	-0.1	-1.6	-1.8	-2.5	
	2	2.1	2.6	2.5	3.0	0.4	0.3	0.9	
Yemen Arab Rep.	1	2.8	-2.5	-2.5	-1.9	-5.3	-5.3	-4.7	
	2	2.9	9.2	9.5	13.0	6.3	6.6	10.1	
Yemen Dem. Rep.	1	2.7	2.5	2.0	2.9	-0.2	-0.6	0.2	
	2	3.0	3.8	3.3	1.8	0.8	0.4	-1.1	
Zaire	1	3.0	3.2	3.2	8.4	0.2	0.1	5.4	
	2	2.5	1.3	1.0	1.7	-1.1	-1.5	-0.8	
Zambia	1	3.0	2.8	2.4	0.4	-0.2	-0.6	-2.5	
	2	3.2	6.3	6.2	5.2	3.0	3.0	2.0	

Developed Countries

Albania	1	2.7	5.0	3.7	8.3	2.2	0.9	5.6	
	2	2.7	3.7	3.6	5.6	1.0	0.9	2.8	
Australia	1	1.9	2.9	2.9	2.8	1.0	1.0	0.9	
	2	1.7	3.4	1.5	6.5	1.7	-0.2	4.8	
Austria	1	0.4	1.9	1.9	5.4	1.4	1.4	4.9	
	2	0.3	2.8	2.9	4.6	2.5	2.5	4.3	
Belux	1	0.5	2.7	2.5	-0.7	2.2	2.0	-1.2	
	2	0.4	0.7	0.7	-0.8	.3	0.3	-1.2	
Bulgaria	1	0.7	3.2	2.8	3.5	2.5	2.1	2.8	
	2	0.6	0.7	1.1	1.6	0.1	0.5	1.0	
Canada	1	1.8	0.5	0.8	-	-1.2	-0.9	-1.7	
	2	1.3	2.9	2.5	5.2	1.6	1.1	3.8	
Czechoslovakia	1	0.4	2.4	2.4	5.6	2.1	2.0	5.2	
	2	0.6	2.8	2.8	4.1	2.2	2.1	3.5	
Denmark	1	0.7	-0.5	-0.7	1.9	-1.2	-1.4	1.2	
	2	0.9	1.3	1.4	-1.2	0.4	0.4	-2.1	
Finland	1	0.3	1.6	1.7	6.4	1.3	1.3	6.0	
	2	0.4	1.7	1.7	4.4	1.4	1.4	4.0	
France	1	0.9	2.1	2.1	3.9	1.2	1.2	3.0	
	2	0.8	1.3	1.3	0.2	0.4	.5	-0.6	
Germany, Dem.	1	-	1.9	1.8	2.9	1.9	1.9	2.9	
	2	-0.1	3.8	3.8	4.3	3.7	3.7	4.2	
Germany Fed.	1	0.7	2.4	2.4	3.6	1.6	1.6	2.8	
	2	0.3	0.4	0.4	1.6	0.1	0.1	1.3	
Greece	1	0.3	4.0	3.3	2.2	3.7	3.0	1.9	
	2	0.3	3.5	3.5	3.0	3.2	3.1	2.7	
Hungary	1	0.3	2.4	2.3	3.5	2.1	2.0	3.1	
	2	0.4	3.8	3.7	6.7	3.4	3.3	6.3	
Iceland	1	1.4	-0.3	-0.6	-	-1.7	-2.0	-	
	2	1.2	3.5	3.4	-	2.3	2.2	-	

APPENDIX B (Contd.)

	Population Period*	Production				Per Caput Production		
		Food	Agricul- tural	Cereals	Food	Agricul- tural	Cereals	
Israel	1	2.9	5.5	5.8	-0.2	2.6	2.9	-3.0
	2	3.1	5.4	5.4	6.8	2.2	2.2	3.6
Italy	1	0.7	2.5	2.5	2.0	1.9	1.8	1.3
	2	0.7	1.2	1.2	1.0	0.5	0.5	0.3
Japan	1	1.1	3.2	3.0	-0.2	2.1	1.9	-1.3
	2	1.3	2.0	1.9	0.1	0.7	0.6	-1.2
Malta	1	-	7.7	7.6	-4.8	7.7	7.6	-4.8
	2	0.3	-1.5	-1.5	2.8	-1.8	-1.8	2.4
Netherlands	1	1.2	4.6	4.5	-3.1	3.3	3.2	-4.3
	2	0.9	3.2	3.4	-3.8	2.3	2.5	-4.7
New Zealand	1	1.5	2.9	2.6	8.7	1.3	1.1	7.1
	2	1.9	1.9	0.7	6.6	-	-1.2	4.6
Norway	1	0.8	0.4	0.5	5.1	-0.4	-0.3	4.2
	2	0.7	1.2	1.2	0.6	0.5	0.5	-0.1
Poland	1	0.8	1.9	2.0	2.5	1.1	1.2	1.7
	2	0.8	3.2	3.2	3.2	2.4	2.3	2.3
Portugal	1	-0.8	1.6	1.5	0.8	2.5	2.3	1.7
	2	0.4	-1.1	-1.1	-2.6	-1.5	-1.5	-3.0
Romania	1	1.1	1.8	1.8	-	0.7	0.7	-1.1
	2	0.9	4.8	4.8	6.4	3.9	3.9	5.5
South Africa	1	3.2	3.3	3.1	3.0	0.1	-0.1	-0.2
	2	2.8	2.0	1.6	3.1	-0.7	-1.1	0.3
Spain	1	1.1	3.0	2.7	3.4	1.9	1.6	2.3
	2	1.0	3.3	3.2	2.2	2.4	2.3	1.3
Sweden	1	0.8	0.5	0.5	3.1	-0.3	-0.3	2.4
	2	0.4	2.0	2.0	2.2	1.6	1.6	1.8
Switzerland	1	1.3	1.7	1.7	1.5	0.4	0.4	0.2
	2	1.1	1.8	1.8	2.6	0.8	0.8	1.5
USSR	1	1.1	3.2	3.1	4.5	2.0	2.0	3.4
	2	1.0	1.3	1.4	0.5	0.3	0.4	-0.5
UK	1	0.4	1.6	1.6	1.5	1.1	1.1	1.1
	2	0.3	0.7	0.8	-	0.4	0.4	-0.3
USA	1	1.1	2.1	1.5	2.2	0.9	0.3	1.0
	2	0.8	3.1	2.8	3.9	2.2	2.0	3.0
Yugoslavia	1	1.0	3.2	3.0	1.8	2.2	2.0	0.8
	2	0.9	4.1	4.1	4.6	3.2	3.2	3.6

APPENDIX C
Per caput daily Calorie and Protein Supplies for Individual Countries
1961-63 and 1972-74

Country	Calories				Protein Supply			
	Supply		Requirement	Supply as percentage of requirement				
	1961-63	1972-74			1961-63	1972-74		
..... kcal percent grams ...								
Developed Countries								
Albania	2340	2503	2410	97	104	70.2		
Australia	3245	3339	2660	122	126	95.8		
Austria	3331	3474	2630	127	132	85.7		
Belgium-Lux.	3355	3645	2640	127	138	93.1		
Bulgaria	3183	3465	2500	127	139	95.0		
Canada	3161	3400	2660	119	128	93.3		
Czechoslovakia	3375	3492	2470	137	141	91.0		
Denmark	3400	3451	2690	126	128	86.9		
Finland	3228	3221	2710	119	119	94.1		
France	3348	3411	2520	133	135	96.8		
Germany, Dem.	3224	3469	2620	123	132	83.9		
Germany, Fed.	3269	3437	2670	122	129	84.0		
Greece	2815	3247	2500	113	130	85.0		
Hungary	3224	3527	2630	123	134	83.6		
Iceland	3121	2999	2660	117	113	125.0		
Ireland	3448	3545	2510	137	141	101.6		
Israel	2869	3182	2570	112	124	69.2		
Italy	3032	3524	2520	120	140	83.1		
Japan	2526	2842	2340	108	121	72.9		
Malta	2670	3080	2480	108	124	79.0		
Netherlands	3240	3325	2690	120	124	85.0		
New Zealand	3514	3501	2640	133	133	107.7		
Norway	3118	3210	2680	116	120	89.7		
Poland	3238	3482	2620	124	133	97.9		
Portugal	2828	3446	2450	115	141	77.7		
Romania	2878	3264	2650	109	123	84.9		
South Africa	2785	2866	2450	114	117	76.4		
Spain	2879	3187	2460	117	130	82.0		
Sweden	3176	3033	2690	118	113	88.1		
Switzerland	3536	3535	2690	131	131	91.2		
UK	3408	3349	2520	135	133	94.3		
USA	3340	3542	2640	127	134	101.3		
USSR	3272	3483	2560	128	136	96.6		
Yugoslavia	3132	3384	2540	123	133	92.1		
Developing Countries								
Afghanistan	2107	2000	2440	86	82	65.2		
Algeria	1925	2065	2400	80	86	51.9		
Angola	1828	1997	2350	78	85	38.0		
Antigua	2102	2071	2350	87	86	58.7		
Argentina	3238	3281	2350	122	124	108.6		
Bahamas	2250	2422	2420	93	100	69.0		
						70.6		

APPENDIX C (Contd.)

Country	Calories				Protein Supply	
	Supply		Requirement	Supply as percentage of requirement		
	1961-63	1972-74			1961-63	1972-74
	.....kcais .....				.....grams	
Bangladesh	1953	1949	2310	85	84	42.7 43.0
Barbados	2661	3207	2420	110	133	65.0 80.4
Belize	2254	2446	2260	100	108	55.8 58.1
Benin	2104	2040	2300	91	89	51.3 51.0
Bhutan	1992	2074	2310	86	90	42.7 44.5
Bolivia	1631	1860	2390	68	78	44.9 48.5
Botswana	2054	2025	2320	89	87	72.6 69.5
Brazil	2382	2538	2390	100	106	61.7 63.4
Brunei	2115	2542	2240	94	113	50.1 64.1
Burma	1920	2131	2160	89	99	50.2 56.0
Burundi	2043	2344	2330	88	101	53.8 61.3
Cameroon	2094	2383	2320	90	103	51.1 59.3
Cape Verde	1751	2224	2350	74	95	42.6 54.7
Central African Rep.	2094	2320	2260	90	103	51.1 59.3
Chad	2325	1765	2380	98	74	79.3 60.1
Chile	2552	2736	2440	105	112	66.2 73.9
China	1942	2282	2360	82	97	53.3 62.8
Colombia	2163	2164	2320	93	93	50.4 47.2
Comoro Is.	2061	2275	2340	88	97	35.8 39.6
Congo	2018	2274	2220	91	102	34.6 41.9
Costa Rica	2158	2513	2240	96	112	52.0 59.6
Cuba	2414	2732	2310	104	118	57.7 70.4
Cyprus	2437	2953	2480	98	119	70.0 90.3
Dominica	2048	2109	2420	85	87	51.2 56.9
Dominican Rep.	1875	2158	2260	83	95	39.7 44.7
Ecuador	1845	2087	2290	81	91	46.0 47.4
Egypt	2578	2632	2510	103	105	73.2 71.3
El Salvador	1808	1885	2290	79	82	51.6 49.8
Ethiopia	2097	2051	2330	90	88	67.4 63.3
Fiji	2487	2647	2280	109	116	52.0 57.1
French Polynesia	2399	2734	2280	105	120	62.9 71.3
Gabon	2157	2274	2340	92	97	44.7 49.3
Gambia	2184	2307	2380	92	97	53.1 58.0
Ghana	2023	2302	2300	88	100	42.6 52.9
Grenada	1915	2145	2420	79	89	49.4 57.0
Guadeloupe	2207	2486	2420	91	103	58.8 71.6
Guatemala	1903	1987	2190	87	91	52.7 52.8
Guinea	1867	1994	2310	81	86	40.1 43.3
Guinea-Bissau	2070	2324	2310	90	101	40.8 48.5
Guyana	2364	2346	2270	104	103	56.2 54.9
Haiti	1961	2029	2260	87	90	46.3 48.7
Honduras	1936	2052	2260	86	91	52.1 52.1
Hong Kong	2472	2599	2290	108	114	66.2 79.4
India	2046	1970	2210	93	89	52.3 48.6
Indonesia	1945	2033	2160	90	94	39.1 42.3
Iran	1849	2326	2410	77	97	45.8 54.4
Iraq	2012	2392	2410	83	99	51.7 60.0
Ivory Coast	2236	2626	2310	97	114	50.8 63.1
Jamaica	1993	2641	2240	89	118	54.3 68.9
Jordan	2199	2208	2460	89	90	52.0 52.5

APPENDIX C (Contd.)

Country	Calories				Protein Supply	
	Supply		Requirement	Supply as percentage of requirement		
	1961-63	1972-74			1961-63	1972-74
..... kcais						
Kenya	2298	2137	2320	99	92	69.8 60.6
Kampuchea	2198	2095	2220	99	94	52.8 48.9
Korea, Dem.	2429	2641	2340	104	113	75.0 77.6
Korea, Rep.	2081	2749	3350	89	117	53.2 73.7
Lao	1845	2076	2220	83	94	51.0 57.6
Lebanon	2410	2508	2480	97	101	67.9 67.6
Lesotho	2091	2204	2280	92	97	63.7 67.6
Liberia	1920	1976	2310	83	86	32.3 35.9
Libya	1788	2698	2360	76	114	45.7 68.1
Macao	1819	1915	2290	79	84	39.8 57.4
Madagascar	2354	2360	2270	104	104	59.4 56.5
Malawi	1943	2414	2320	84	104	52.6 68.4
Sabah	2448	2792	2230	110	125	46.0 60.3
Sarawak	2398	2514	2230	107	113	43.2 51.8
Malaysia Pen.	2445	2534	2230	110	114	43.1 45.0
Maldives	1669	1810	2210	76	82	60.8 63.9
Mali	2000	1759	2350	85	75	63.6 52.7
Martinique	2296	2496	2420	95	103	62.9 71.8
Mauritania	2006	1867	2310	87	81	74.3 63.2
Mauritius	2332	2438	2270	103	107	48.5 53.4
Mexico	2537	2693	2330	109	116	62.7 65.6
Mongolia	2309	2477	2430	95	102	97.7 92.8
Morocco	2258	2593	2420	93	107	58.8 70.0
Mozambique	2008	1989	2340	86	85	39.4 37.3
Namibia	2187	2162	2280	96	95	70.1 71.1
Nepal	2023	2015	2200	92	92	49.8 49.2
Neth. Antilles	2346	2475	2420	97	102	65.7 71.3
New Caledonia	2688	2900	2280	118	127	64.2 71.6
New Hebrides	2063	2341	2280	90	103	51.0 62.3
Nicaragua	2187	2384	2250	97	106	64.0 68.4
Niger	2189	1857	2350	93	79	72.5 63.6
Nigeria	2156	2073	2360	91	88	49.9 46.2
Pakistan	1830	2132	2310	79	92	49.1 54.0
Panama	2317	2332	2310	100	101	57.3 57.4
Papua New Guinea	2002	2245	2280	88	98	39.7 48.2
Paraguay	2475	2723	2310	107	118	71.3 74.7
Peru	2230	2328	2350	95	99	62.1 61.0
Philippines	1880	1953	2260	83	86	43.8 46.6
Rhodesia	2481	2477	2390	104	104	73.4 72.2
Reunion	2491	2554	2270	110	113	61.4 67.8
Rwanda	1913	2102	2320	82	91	50.2 54.0
St Lucia	1804	2170	2420	75	90	43.4 57.4
St Vincent	2044	2370	2420	84	98	43.6 57.0
São Tomé	2174	2130	2350	93	91	60.2 46.4
Samoa	2334	2275	2280	102	108	55.4 52.7
Saudi Arabia	2159	2411	2420	89	100	52.2 61.4
Senegal	2068	2181	2380	87	92	58.9 61.7
Sierra Leone	1962	2254	2300	85	98	43.7 50.5
Singapore	2412	2825	2300	105	123	60.9 75.4
Solomon Is.	2115	2056	2280	93	90	38.6 40.2

APPENDIX C (Contd.)

Country	Calories				Protein Supply		
	Supply		Requirement	Supply as percentage of requirement		1961-63	1972-74
	1961-63	1972-74		1961-63	1972-74		
..... kcals							
Somalia	1900	1916	2310	82	83	63.3	59.2
Sri Lanka	2140	2078	2220	96	94	43.8	41.5
Sudan	1870	2067	2350	80	88	55.2	60.7
Surinam	2008	2381	2260	89	105	51.3	53.5
Swaziland	1957	2118	2320	84	91	55.4	57.0
Syria	2442	2525	2480	98	102	62.4	63.5
Tanzania	1839	1958	2320	79	84	41.3	46.1
Thailand	2105	2315	2220	95	104	42.2	49.9
Togo	1997	2167	2300	87	94	42.5	52.6
Tonga	2443	2574	2280	107	113	37.2	45.4
Trinidad & Tobago	2419	2531	2420	100	105	61.8	64.8
Tunisia	1965	2378	2390	82	99	50.4	65.6
Turkey	2788	2830	2520	111	112	76.1	74.5
Uganda	2066	2141	2330	89	92	48.0	54.5
Upper Volta	1902	1728	2370	80	73	61.9	56.0
Uruguay	2927	2978	2670	110	112	97.7	93.2
Venezuela	2172	2399	2470	88	97	56.6	62.4
Vietnam	2101	2288	2160	97	106	48.1	56.9
Yemen Arab Rep.	2062	1996	2420	85	82	64.8	59.2
Yemen, Dem.	1976	2043	2410	82	85	48.0	50.1
Zaire	1931	1848	2220	87	83	30.6	31.2
Zambia	1853	2016	2310	80	87	55.7	58.1

APPENDIX D
Estimates and Projections of Total Population and the Related Growth Rates -
World and Regions - 1960-2000

Region	Total Population							Average Annual Growth Rates						
	1960	1965	1970	1975	1980	1990	2000	1960-1965	1965-1970	1970-1975	1975-1980	1980-1990	1990-2000	
..... millions percent
Developed Market Economies	650.2	690.8	724.4	757.1	791.2	859.8	922.8	1.2	1.0	0.9	0.9	0.8	0.7	
North America	198.6	213.9	226.3	236.7	248.7	275.0	296.0	1.5	1.1	0.9	1.0	1.0	0.7	
Western Europe	326.8	343.0	354.0	364.3	374.1	394.4	413.8	1.0	0.6	0.6	0.5	0.5	0.5	
Oceania	12.7	14.0	15.4	16.8	18.4	21.5	24.5	2.0	1.9	1.8	1.8	1.6	1.3	
Other Developed Market Economies	112.1	119.8	128.8	139.2	150.0	168.9	188.4	1.3	1.5	1.6	1.5	1.2	1.1	
Eastern Europe and USSR	312.7	332.9	347.9	363.8	380.6	412.9	440.7	1.3	0.9	0.9	0.9	0.8	0.7	
ALL DEVELOPED COUNTRIES	962.9	1023.7	1072.3	1120.9	1171.8	1272.7	1363.5	1.2	0.9	0.9	0.9	0.8	0.7	
Developing Market Economies	1323.1	1500.4	1704.9	1939.5	2217.6	2878.8	3623.5	2.5	2.6	2.6	2.7	2.6	2.3	
Africa	219.4	246.3	279.3	318.8	366.7	491.8	657.9	2.3	2.5	2.7	2.8	3.0	3.0	
Latin America	215.6	247.3	283.0	324.1	371.6	385.6	619.9	2.8	2.7	2.7	2.8	2.7	2.5	
Near East	130.4	148.3	169.9	195.0	224.8	297.4	380.4	2.6	2.7	2.8	2.9	2.8	2.5	
Far East	754.6	854.8	968.7	1097.0	1249.3	1597.3	1956.9	2.5	2.5	2.5	2.6	2.5	2.1	
Other Developing Market Economies	3.2	3.6	4.0	4.6	5.2	6.7	8.3	2.5	2.5	2.5	2.6	2.6	2.3	
Asian Centrally Planned Economies	701.5	764.5	833.1	907.7	985.2	1129.7	1269.7	1.7	1.7	1.7	1.7	1.4	1.2	
ALL DEVELOPING COUNTRIES	2024.6	2264.9	2538.0	2847.2	3202.8	4008.5	4893.2	2.3	2.3	2.3	2.4	2.3	2.0	
WORLD	2987.5	3288.6	3610.4	3968.1	4374.6	5281.2	6256.7	1.9	1.9	1.9	2.0	1.9	1.7	

Note: The above regional aggregates are based on the country by country estimates and projections of the population prepared by the United Nations. For details regarding the methods and assumptions underlying the projections please see World Population Prospects as Assessed in 1973, Population Studies No.60, ST/ESA/Ser.A/60, United Nations, New York, 1977.

APPENDIX E
Estimates and Projections of Total Labour Force and the Related Growth Rates -
World and Regions - 1960-2000

Region	Total Labour Force							Average Annual Growth Rates						
	1960	1965	1970	1975	1980	1990	2000	1960-1965	1965-1970	1970-1975	1975-1980	1980-1990	1990-2000	
..... millions .....														..... percent
Developed Market Economies	277.0	295.0	311.9	332.0	351.4	386.1	420.1	1.3	1.1	1.3	1.1	0.9	0.8	
North America	79.9	86.8	95.7	104.2	112.6	125.4	139.5	1.7	2.0	1.7	1.6	1.1	1.1	
Western Europe	141.2	145.9	147.3	153.1	158.8	170.1	178.1	0.6	0.2	0.8	0.7	0.7	0.5	
Oceania	5.0	5.7	6.4	7.1	7.8	9.1	10.7	2.5	2.5	2.0	1.8	1.6	1.6	
Other Developed Market Economies	50.9	56.6	62.5	67.6	72.2	81.5	91.9	2.2	2.0	1.6	1.3	1.2	1.2	
Eastern Europe and USSR	159.5	166.2	171.8	184.2	194.7	207.7	219.0	0.8	0.7	1.4	1.1	0.6	0.5	
ALL DEVELOPED COUNTRIES	436.5	461.2	483.7	516.2	546.1	593.8	639.1	1.1	1.0	1.3	1.1	0.8	0.7	
Developing Market Economies	519.9	570.2	632.2	705.0	791.9	1010.2	1303.1	1.9	2.1	2.2	2.4	2.5	2.6	
Africa	93.7	102.9	113.8	126.1	140.9	179.0	233.8	1.9	2.0	2.1	2.2	2.4	2.7	
Latin America	70.8	79.2	89.2	102.0	117.1	155.4	207.3	2.3	2.4	2.7	2.8	2.9	2.9	
Near East	45.0	49.5	55.1	61.7	69.7	90.6	119.8	1.9	2.1	2.3	2.4	2.7	2.8	
Far East	308.9	336.9	372.4	413.1	462.1	582.3	738.6	1.8	2.0	2.1	2.3	2.3	2.4	
Other Developing Market Economies	1.5	1.6	1.8	2.0	2.3	2.9	3.6	1.9	2.1	2.3	2.4	2.3	2.4	
Asian Centrally Planned Economies	341.0	363.8	392.7	424.4	456.3	525.9	603.7	1.3	1.5	1.6	1.5	1.4	1.4	
ALL DEVELOPING COUNTRIES	860.9	934.0	1024.9	1129.4	1248.2	1536.1	1906.8	1.6	1.9	2.0	2.0	2.1	2.2	
WORLD	1297.4	1395.2	1508.6	1645.6	1794.3	2129.9	2545.9	1.5	1.6	1.8	1.7	1.7	1.8	

Note: The above regional aggregates are derived on the basis of the ILO country by country estimates and projections of the labour force.
For more detailed information, please see Labour Force, 1950-2000, Vol. I, II, III, IV and V, ILO, Geneva, 1977.

APPENDIX F

Estimates and Projections of Agricultural Population and the Related Growth Rates -
World and Regions - 1960-2000

Region	Agricultural Population							Average Annual Growth Rates						
	1960	1965	1970	1975	1980	1990	2000	1960-1965	1965-1970	1970-1975	1975-1980	1980-1990	1990-2000	
..... millions .....														..... percent
Developed Market Economies	129.9	112.8	93.2	79.5	68.0	50.2	38.1	-2.8	-3.7	-3.1	-3.1	-3.0	-2.7	
North America	14.3	12.0	9.3	7.4	6.1	4.4	3.4	-3.4	-5.0	-4.5	-3.8	-3.2	-2.4	
Western Europe	78.1	67.7	55.5	47.0	39.6	27.7	19.1	-2.8	-3.9	-3.2	-3.4	-3.5	-3.7	
Oceania	1.5	1.4	1.3	1.3	1.2	1.0	.8	-1.1	-1.3	-1.3	-1.4	-1.6	-1.9	
Other Developed Market Economies	36.1	31.7	27.1	23.8	21.1	17.1	14.8	-2.6	-3.1	-2.5	-2.4	-2.1	-1.4	
Eastern Europe and USSR	132.2	117.8	99.2	86.3	75.0	56.1	41.4	-2.3	-3.4	-2.8	-2.8	-2.9	-3.0	
ALL DEVELOPED COUNTRIES	262.1	230.6	192.4	165.8	143.0	106.3	79.5	-2.5	-3.6	-2.9	-2.9	-2.9	-2.9	\$
Developing Market Economies	919.9	998.8	1085.7	1174.2	1269.4	1445.5	1568.9	1.7	1.7	1.6	1.6	1.3	0.8	
Africa	173.6	188.3	205.9	224.9	246.3	294.4	343.2	1.6	1.8	1.8	1.8	1.8	1.5	
Latin America	103.9	110.5	116.5	122.1	127.4	135.4	137.0	1.2	1.1	0.9	0.9	0.6	0.1	
Near East	87.8	94.7	102.6	110.7	119.4	136.5	149.5	1.5	1.6	1.5	1.5	1.4	0.9	
Far East	552.0	602.6	657.8	713.3	772.7	874.9	934.2	1.8	1.8	1.6	1.6	1.2	0.7	
Other Developing Market Economies	2.5	2.7	3.0	3.3	3.6	4.3	5.0	1.9	1.9	1.9	1.9	1.9	1.5	
Asian Centrally Planned Economies	525.9	546.4	566.8	582.6	592.8	580.9	524.7	0.8	0.7	0.6	0.3	-0.2	-1.0	
ALL DEVELOPING COUNTRIES	1445.8	1545.2	1652.5	1756.8	1862.2	2026.4	2093.6	1.3	1.4	1.2	1.2	0.8	0.3	
WORLD	1707.9	1775.8	1844.9	1922.6	2005.1	2132.7	2173.1	0.8	0.8	0.8	0.8	0.6	0.2	F

Note: The agricultural population is defined as the agricultural labour force together with their non-working dependents. The figures are aggregates of country by country estimates and projections prepared by FAO.

APPENDIX G

Estimates and Projections of Agricultural Labour Force and the Related Growth Rates -
World and Regions - 1960-2000

Region	Agricultural Labour Force							Average Annual Growth Rates						
	1960	1965	1970	1975	1980	1990	2000	1960-1965	1965-1970	1970-1975	1975-1980	1980-1990	1990-2000	
..... millions .....														..... percent
Developed Market Economies	56.1	48.7	40.2	34.4	29.4	21.4	16.1	-2.8	-3.8	-3.0	-3.1	-3.1	-2.8	
North America	5.7	4.8	3.9	3.2	2.7	2.0	1.6	-3.2	-4.2	-3.8	-3.3	-3.1	-2.1	
Western Europe	33.1	28.2	22.6	19.4	16.4	11.6	8.0	-3.2	-4.3	-3.0	-3.2	-3.4	-3.7	
Oceania	0.6	0.6	0.6	0.5	0.5	0.4	0.4	-0.6	-0.7	-1.1	-1.4	-1.6	-1.6	
Other Developed Market Economies	16.6	15.1	13.1	11.3	9.7	7.4	6.2	-1.9	-2.8	-2.9	-3.0	-2.7	-1.7	
Eastern Europe and USSR	67.6	59.1	49.4	44.0	38.6	28.6	21.0	-2.7	-3.5	-2.3	-2.6	-3.0	-3.0	
ALL DEVELOPED COUNTRIES	123.7	107.8	89.5	78.5	68.0	50.0	37.1	-2.7	-3.7	-2.6	-2.8	-3.0	-2.9	
Developing Market Economies	368.8	388.0	412.0	436.8	463.6	517.6	574.1	1.0	1.2	1.2	1.2	1.1	1.0	
Africa	75.5	80.3	85.9	91.4	97.3	110.7	126.0	1.2	1.4	1.2	1.3	1.3	1.3	
Latin America	33.7	35.0	36.3	38.0	39.7	42.8	45.1	0.6	0.7	0.9	0.8	0.8	0.5	
Near East	31.2	32.5	34.2	35.9	37.8	42.1	47.0	0.8	1.0	1.0	1.0	1.1	1.1	
Far East	227.2	238.8	254.2	270.0	287.2	320.2	353.7	1.0	1.3	1.2	1.2	1.1	1.0	
Other Developing Market Economies	1.2	1.3	1.4	1.5	1.6	1.9	2.2	1.3	1.5	1.6	1.7	1.6	1.5	
Asian Centrally Planned Economies	255.8	260.1	267.2	272.4	274.5	270.0	248.5	0.3	0.5	0.4	0.2	-0.2	-0.8	
ALL DEVELOPING COUNTRIES	624.6	648.0	679.2	709.2	738.1	787.6	822.6	0.7	0.9	0.9	0.8	0.6	0.4	
WORLD	748.3	755.8	768.7	787.7	806.1	837.6	859.7	0.2	0.3	0.5	0.5	0.4	0.3	

Note: The figures are aggregates of estimates and projections prepared on a country by country basis. Estimates for 1960, 1965 and 1970 have been prepared by ILO, while the projections from 1975 onwards have been derived by FAO.

APPENDIX H

Agricultural Labour Force as a Percentage of Total Labour Force -
World and Regions ~ 1960-2000

Region	1960	1965	1970	1975	1980	1990	2000
Developed Market Economies	20.2	16.5	12.9	10.4	8.4	5.5	3.8
North America	7.1	5.6	4.1	3.1	2.4	1.6	1.2
Western Europe	23.5	19.3	15.4	12.7	10.4	6.8	4.5
Oceania	12.0	10.2	8.7	7.5	6.4	4.6	3.4
Other Developed Market Economies	32.6	26.7	20.9	16.7	13.4	9.0	6.7
Eastern Europe and USSR	42.4	35.6	28.7	23.9	19.8	13.8	9.6
ALL DEVELOPED COUNTRIES	28.3	23.4	18.5	15.2	12.4	8.4	5.8
Developing Market Economies	70.9	68.0	65.2	62.0	58.5	51.2	44.1
Africa	80.5	78.0	75.5	72.4	69.1	61.8	53.9
Latin America	47.7	44.2	40.8	37.3	33.9	27.5	21.8
Near East	69.5	65.7	62.0	58.1	54.2	46.5	39.2
Far East	73.5	70.9	68.3	65.4	62.1	55.0	47.9
Other Developing Market Economies	81.0	78.7	76.4	73.9	71.3	66.4	61.3
Asian Centrally Planned Economies	75.0	71.5	68.0	64.2	60.2	51.3	41.2
ALL DEVELOPING COUNTRIES	72.6	69.4	66.3	62.8	59.1	51.3	43.1
WORLD	57.7	54.2	51.0	47.9	44.9	39.3	33.8

APPENDIX I

Agricultural Output per Agricultural Person and per Agricultural Worker - World and Regions, 1964-66, 1969-71 and 1974-76

Region	Agricultural Output per Agricultural Person			Agricultural Output per Agricultural Worker		
	1964-66	1969-71	1974-76	1964-66	1969-71	1974-76
Developed Market Economies	1.27	1.71	2.17	2.93	3.96	5.00
North America	5.78	8.22	11.25	14.33	19.52	25.72
Western Europe	0.84	1.15	1.47	2.02	2.82	3.56
Oceania	5.69	6.84	7.67	14.14	16.49	19.28
Other Developed Market Economies	0.26	0.36	0.46	.54	.74	.96
Eastern Europe and USSR	0.56	0.78	1.00	1.12	1.56	1.96
ALL DEVELOPED COUNTRIES	0.91	1.23	1.56	1.94	2.64	3.30
Developing Market Economies	0.09	0.09	0.10	.23	.25	.26
Africa	0.07	0.08	0.08	.18	.18	.19
Latin America	0.21	0.23	0.26	.67	.75	.82
Near East	0.12	0.13	0.14	.35	.38	.44
Far East	0.06	0.07	0.07	.16	.18	.19
Other Developing Market Economies	0.20	0.20	0.20	.42	.42	.44
Asian Centrally Planned Economies	0.09	0.09	0.10	.16	.20	.22
ALL DEVELOPING COUNTRIES	0.09	0.09	0.10	.21	.23	.25
WORLD	0.19	0.21	0.23	.46	.51	.55

Note: The agricultural production estimates on which the above indicators are based, are expressed in terms of wheat price equivalents.

APPENDIX J

Appendix J.1 - Daily Per Caput Food Supply - Developed Market Economies

APPENDIX 3 (Contd.)

Appendix J.2 - Daily Per Caput Food Supply - North America

APPENDIX J (Contd.)

Appendix J.3 - Daily Per Caput Food Supply - Western Europe

APPENDIX J (Contd.)

Appendix J.4 - Daily Per Caput Food Supply - Oceania

APPENDIX J (Contd.)

Appendix J.5 – Daily Per Caput Food Supply – Other Developed Market Economies

APPENDIX J (Contd.)

Appendix J.6 - Daily Per Caput Food Supply - Eastern Europe and USSR

APPENDIX J (Contd.)

Appendix J.7 Daily Per Caput Food Supply - All Developed Countries

APPENDIX J (Contd.)

Appendix J.8 – Daily Per Caput Food Supply ~ Developing Market Economies

APPENDIX J (Contd.)

Appendix J.9 - Daily Per Caput Food Supply - Africa

APPENDIX J (Contd.)

Appendix J.10 - Daily Per Caput Food Supply - Latin America

	61-63	64-66	69-71	72-74	1971	1972	1973	1974
CALORIES (KCAL)								
GRAND TOTAL	2404	2470	2526	2538	2525	2529	2530	2555
VEGETABLE PRODUCTS	2005	2072	2113	2136	2117	2127	2133	2149
ANIMAL PRODUCTS	397	398	413	401	408	402	397	405
GRAND TOTAL EXCL ALCOHOL	2340	2404	2463	2473	2461	2466	2466	2488
CEREALS	954	974	976	1001	972	975	1009	1020
ROOTS AND TUBERS	173	184	192	168	187	179	164	164
SUGARS AND HONEY	385	386	405	423	405	420	424	426
PULSES	131	140	132	126	139	136	121	120
NUTS AND OIL SEEDS	27	31	30	24	31	28	23	21
VEGETABLES	22	23	22	22	23	22	22	22
FRUIT	115	120	129	132	133	133	129	135
MEAT AND OFFALS	202	193	201	190	191	189	186	193
Eggs	14	15	17	18	17	18	18	18
FISH AND SEAFOOD	12	14	15	16	15	17	15	15
MILK	121	128	130	127	133	128	126	128
OILS AND FATS	176	187	204	216	204	211	217	219
VEGETABLE OILS AND FATS	126	140	155	166	154	161	168	170
ANIMAL OILS AND FATS	49	48	49	49	50	50	49	50
ALCOHOLIC BEVERAGES	64	66	63	65	64	64	64	67
PROTEIN (G)								
GRAND TOTAL	64.0	65.1	65.9	64.8	65.7	64.8	64.3	65.3
VEGETABLE PRODUCTS	39.0	40.4	40.1	39.8	40.5	39.9	39.5	39.9
ANIMAL PRODUCTS	25.0	24.7	25.9	25.1	25.2	25.0	24.8	25.4
GRAND TOTAL EXCL ALCOHOL	63.8	64.9	65.8	64.7	65.6	64.7	64.2	65.1
CEREALS	23.6	24.1	24.2	24.8	24.1	24.1	25.0	25.3
ROOTS AND TUBERS	2.3	2.4	2.6	2.3	2.5	2.3	2.2	2.3
SUGARS AND HONEY	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PULSES	8.2	8.8	8.4	7.9	8.8	8.6	7.6	7.5
NUTS AND OIL SEEDS	1.1	1.2	1.1	0.9	1.1	1.0	0.8	0.8
VEGETABLES	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
FRUIT	1.4	1.5	1.6	1.7	1.7	1.7	1.6	1.7
MEAT AND OFFALS	15.1	14.2	14.9	14.0	14.0	13.9	13.9	14.3
Eggs	1.0	1.1	1.3	1.4	1.3	1.3	1.3	1.4
FISH AND SEAFOOD	1.8	1.9	2.0	2.2	2.1	2.2	2.1	2.1
MILK	6.9	7.3	7.6	7.4	7.2	7.4	7.4	7.6
OILS AND FATS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VEGETABLE OILS AND FATS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANIMAL OILS AND FATS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ALCOHOLIC BEVERAGES	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
FAT (G)								
GRAND TOTAL	52.2	54.0	56.6	56.6	56.3	56.4	56.3	56.9
VEGETABLE PRODUCTS	24.1	26.2	27.8	28.5	27.8	28.3	28.6	28.7
ANIMAL PRODUCTS	28.1	27.9	28.8	28.0	28.5	28.2	27.7	28.3
GRAND TOTAL EXCL ALCOHOL	52.2	54.0	56.6	56.6	56.3	56.4	56.3	56.9
CEREALS	5.1	5.2	5.2	5.3	5.2	5.2	5.3	5.3
ROOTS AND TUBERS	0.4	0.3	0.3	0.4	0.5	0.4	0.4	0.4
SUGARS AND HONEY	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
PULSES	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6
NUTS AND OIL SEEDS	2.3	2.5	2.5	2.0	2.6	2.4	1.9	1.7
VEGETABLES	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
FRUIT	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MEAT AND OFFALS	14.9	14.4	14.8	14.2	14.2	14.0	14.0	14.4
Eggs	0.9	1.0	1.1	1.2	1.1	1.2	1.2	1.2
FISH AND SEAFOOD	0.5	0.6	0.7	0.7	0.7	0.8	0.6	0.7
MILK	6.3	6.7	6.7	6.5	6.8	6.6	6.4	6.5
OILS AND FATS	19.8	21.1	22.9	24.3	23.0	23.7	24.5	24.7
VEGETABLE OILS AND FATS	14.3	15.8	17.5	18.8	17.5	18.2	19.0	19.2
ANIMAL OILS AND FATS	5.5	5.3	5.4	5.5	5.6	5.6	5.4	5.5
ALCOHOLIC BEVERAGES	0.6	0.9	0.9	0.0	0.0	0.0	0.0	0.0

APPENDIX J (Contd.)

Appendix J.11 – Daily Per Caput Food Supply – Near East

APPENDIX J (Contd.)

Appendix J,12 - Daily Per Caput Food Supply - Far East

Appendix J,13 – Daily Per Caput Food Supply – Other Developing Market Economies

APPENDIX J (Contd.)

Appendix J, 14 - Daily Per Caput Food Supply - Asian Centrally Planned Economies

Appendix J.15 - Daily Per Caput Food Supply - All Developing Countries

APPENDIX J (Contd.)

Appendix J.16 – Daily Per Caput Food Supply – World

APPENDIX K

Appendix K.1 - Indicators of Per Capita Food Supply and Annual Rates of Growth in Developed Market Economies

CATEGORIES	GRAND TOTAL	64-66	67-71	72-74	75-76	77-79	79-82
GRAND TOTAL	100.0	102.3	104.9	107.2	107.2	107.4	107.4
VEGETABLE PRODUCTS	100.0	102.5	104.5	106.5	108.5	108.5	109.5
ANIMAL PRODUCTS	100.0	106.5	102.5	102.5	103.5	103.5	103.5
GRAND TOTAL excl. ALCOHOL	100.0	102.9	109.8	110.9	111.4	111.5	111.5
GENELS	100.0	100.3	104.1	105.3	105.4	105.2	105.4
ROOTS AND TUBERS	100.0	97.0	91.8	92.6	90.3	91.1	90.6
SUGARS AND HONEY	100.0	94.4	89.7	85.9	85.9	84.9	84.1
PULSES	100.0	92.6	87.8	89.3	84.5	85.4	84.5
NUTS AND OIL SEEDS	100.0	101.7	107.9	113.5	107.5	113.0	114.7
VEGETABLES	100.0	102.7	108.8	110.5	110.5	111.7	113.0
FRUIT	100.0	104.8	109.0	110.7	110.5	111.0	111.0
MEAT AND OFFAL	100.0	105.4	118.4	121.6	116.5	115.7	115.0
ECS	100.0	102.9	116.3	111.3	117.2	112.4	112.4
FISH AND SEAFOOD	100.0	103.9	102.1	122.6	117.3	118.9	123.6
MILK	100.0	101.1	101.1	101.8	101.0	102.1	100.9
OILS AND FATS	100.0	102.9	112.4	116.7	114.7	116.2	115.7
VEGETABLE OILS AND FATS	100.0	107.7	124.4	133.6	127.4	131.7	132.9
ANIMAL OILS AND FATS	100.0	101.6	103.2	106.3	102.9	103.7	105.6
ALCOHOLIC BEVERAGES	100.0	100.5	115.9	101.6	98.2	107.9	102.3
NON ALCOHOLIC BEVERAGES	100.0	100.6	102.1	122.1	120.6	126.5	125.0
PROVINCE C.G.	64-66	64-66	67-71	72-74	75-76	77-79	79-82
GRAND TOTAL	100.0	101.5	105.0	106.3	108.6	108.5	108.7
VEGETABLE PRODUCTS	100.0	99.5	93.5	95.7	97.3	95.3	95.4
ANIMAL PRODUCTS	100.0	104.6	112.3	116.9	115.0	115.1	115.0
GRAND TOTAL excl. ALCOHOL	100.0	100.6	103.5	104.1	103.6	103.5	103.6
GENELS	100.0	97.0	91.9	90.4	90.9	90.6	90.6
ROOTS AND TUBERS	100.0	95.3	92.3	89.2	91.1	89.9	89.6
SUGARS AND HONEY	100.0	91.2	87.7	92.8	96.7	97.1	96.3
PULSES	100.0	98.9	85.5	88.1	86.5	84.3	84.3
NUTS AND OIL SEEDS	100.0	99.8	97.4	107.4	111.9	114.5	112.3
VEGETABLES	100.0	107.8	107.4	109.9	106.3	109.5	111.4
FRUIT	100.0	105.2	118.3	122.8	119.9	121.3	126.3
MEAT AND OFFAL	100.0	107.6	121.3	126.9	124.4	127.3	122.6
ECS	100.0	103.8	116.2	111.2	117.7	112.3	122.9
FISH AND SEAFOOD	100.0	101.8	111.2	117.1	117.1	113.8	113.6
MILK	100.0	101.7	102.8	104.1	102.9	104.6	104.6
OILS AND FATS	100.0	104.1	107.5	109.3	108.7	109.5	109.5
VEGETABLE OILS AND FATS	100.0	104.0	107.1	109.3	109.1	111.4	108.5
ANIMAL OILS AND FATS	100.0	98.0	95.9	92.2	91.9	92.4	92.4
ALCOHOLIC BEVERAGES	100.0	112.4	131.6	144.1	135.4	139.0	145.6
NON ALCOHOLIC BEVERAGES	100.0	100.5	112.1	122.7	115.7	147.7	147.7
PROVINCE C.G.	61-64	61-64	65-71	72-74	75-76	77-79	79-82
GRAND TOTAL	100.0	102.7	112.5	115.5	114.5	115.6	115.4
VEGETABLE PRODUCTS	100.0	106.1	118.6	126.5	122.9	123.1	123.0
ANIMAL PRODUCTS	100.0	103.7	112.9	110.7	111.7	111.5	111.5
GRAND TOTAL excl. ALCOHOL	100.0	103.9	103.7	112.5	115.5	115.5	115.5
GENELS	100.0	93.8	93.1	92.1	92.4	92.8	91.9
ROOTS AND TUBERS	100.0	99.0	99.2	85.8	87.3	86.3	85.4
SUGARS AND HONEY	100.0	96.0	99.2	96.6	97.7	97.2	96.5
PULSES	100.0	94.8	87.9	99.1	94.7	95.7	94.3
NUTS AND OIL SEEDS	100.0	103.2	111.0	117.4	111.6	117.1	118.5
VEGETABLES	100.0	109.0	103.5	109.1	111.3	108.7	111.6
FRUIT	100.0	105.1	117.5	122.7	112.1	120.8	124.6
MEAT AND OFFAL	100.0	104.2	104.8	117.6	120.7	121.6	121.7
ECS	100.0	103.6	103.7	114.1	115.6	117.8	117.8
FISH AND SEAFOOD	100.0	105.3	105.3	119.1	115.6	113.8	113.5
MILK	100.0	101.3	101.7	102.3	122.3	122.4	122.0
OILS AND FATS	100.0	102.9	113.4	116.7	114.3	105.6	105.3
VEGETABLE OILS AND FATS	100.0	107.7	123.1	122.7	122.4	116.1	115.7
ANIMAL OILS AND FATS	100.0	99.3	101.6	98.1	98.1	97.7	97.7
ALCOHOLIC BEVERAGES	100.0	99.3	99.3	101.6	99.2	98.0	97.7

Appendix K-2 - Indices of Per Capita Food Supply and Annual Rates of Growth - North America

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APPENDIX K (Contd.)

Appendix K-3 - Indices of Per Capita Food Supply and Annual Rates of Growth - Western Europe

		1961-63	64-66	67-71	72-74	1971	1972	1973	1974	1975	1976	73/74	73/75
CALORIES (KCAL)	GRAND TOTAL	100.0	100.0	104.1	105.8	104.5	104.5	101.2	101.2	102.5	102.5	0.57	0.52
VEGETABLE PRODUCTS	100.0	99.5	101.0	102.4	101.0	101.0	101.2	101.2	101.5	102.5	102.5	0.45	0.45
ANIMAL PRODUCTS	100.0	100.3	101.3	102.3	101.3	101.3	102.3	102.3	102.6	102.6	102.6	1.22	1.22
GRAND TOTAL EXCL ALCOHOL	100.0	100.4	102.3	103.3	104.3	103.7	103.3	103.3	103.6	105.0	105.3	0.41	0.43
CEREALS	100.0	95.9	95.7	96.5	98.7	96.5	98.7	98.7	98.7	98.7	98.7	-0.45	-0.45
ROOTS AND TUBERS	100.0	94.1	91.6	93.2	96.2	96.2	96.2	96.2	96.6	98.1	98.1	-1.04	-1.04
SUGARS AND HONEY	100.0	102.5	111.5	117.7	112.6	112.6	112.5	112.5	112.5	121.7	121.7	-1.99	-1.99
PULSES	100.0	92.8	93.4	90.6	93.6	93.4	93.4	93.4	93.6	92.7	92.7	-0.95	-1.03
HUITS AND OIL SEEDS	100.0	106.5	110.5	114.1	106.5	106.5	111.6	111.6	112.2	116.1	116.1	-0.61	-1.14
VEGETABLES	100.0	103.5	111.6	111.6	111.6	111.6	112.1	112.1	112.1	114.3	114.3	-0.13	-0.13
FRUIT	100.0	102.6	104.5	104.5	102.5	102.5	102.5	102.5	102.5	108.6	108.6	-0.06	-0.06
MEAT AND OFFALS	100.0	101.4	102.0	102.0	101.4	101.4	101.4	101.4	101.4	107.1	107.1	-0.66	-0.66
Eggs	100.0	103.4	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	-0.35	-0.35
FISH AND SEAFOOD	100.0	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	-0.01	-0.01
MILK	100.0	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	112.6	112.6	-0.75	-0.75
OILS AND FATS	100.0	102.1	102.1	102.1	102.1	102.1	102.1	102.1	102.1	112.6	112.6	-1.02	-1.02
VEGETABLE OILS AND FATS	100.0	104.3	104.3	104.3	104.3	104.3	104.3	104.3	104.3	112.1	112.1	-1.77	-1.77
ANIMAL OILS AND FATS	100.0	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	119.3	119.3	-1.34	-1.34
ALCOHOLIC BEVERAGES	100.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	101.8	101.8	-0.22	-0.22
PROTEIN (G)	GRAND TOTAL	61-63	64-66	67-71	72-74	1971	1972	1973	1974	1975	1976	73/74	73/75
VEGETABLE PRODUCTS	100.0	105.6	104.2	105.3	104.4	105.3	105.3	105.3	105.3	106.1	106.1	0.52	0.44
ANIMAL PRODUCTS	100.0	97.3	93.8	92.8	92.7	92.7	92.7	92.7	92.7	92.7	92.7	-0.79	-0.68
GRAND TOTAL EXCL ALCOHOL	100.0	98.1	105.0	108.9	108.9	108.9	108.9	108.9	108.9	126.6	126.6	-1.12	-1.12
CEREALS	100.0	97.1	101.3	101.3	101.3	101.3	101.3	101.3	101.3	105.3	105.3	0.16	0.16
ROOTS AND TUBERS	100.0	96.0	89.8	86.5	86.5	86.5	86.5	86.5	86.5	87.2	87.2	-0.23	-0.23
SUGARS AND HONEY	100.0	93.9	91.3	91.3	91.3	91.3	91.3	91.3	91.3	112.6	112.6	-1.16	-1.16
PULSES	100.0	98.6	97.4	101.5	96.9	96.9	96.9	96.9	96.9	101.2	101.2	-1.12	-1.12
HUITS AND OIL SEEDS	100.0	94.3	94.3	94.3	94.3	94.3	94.3	94.3	94.3	101.6	101.6	-0.23	-0.23
VEGETABLES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.6	101.6	-0.93	-0.93
FRUIT	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	111.7	111.7	-0.22	-0.22
MEAT AND OFFALS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	112.6	112.6	-1.21	-1.21
Eggs	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	127.4	127.4	-2.29	-2.29
FISH AND SEAFOOD	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	133.4	133.4	-1.96	-1.96
MILK	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	119.6	119.6	-1.67	-1.67
OILS AND FATS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	104.2	104.2	-0.41	-0.41
VEGETABLE OILS AND FATS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.2	101.2	-0.37	-0.37
ANIMAL OILS AND FATS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	102.6	102.6	-0.38	-0.38
ALCOHOLIC BEVERAGES	100.0	115.5	133.0	142.5	136.7	138.7	138.7	138.7	138.7	146.6	146.6	3.36	3.36
FAT (G)	GRAND TOTAL	61-63	64-66	67-71	72-74	1971	1972	1973	1974	1975	1976	73/74	73/75
VEGETABLE PRODUCTS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	115.0	115.0	1.41	1.39
ANIMAL PRODUCTS	100.0	100.5	101.4	101.4	101.4	101.4	101.4	101.4	101.4	118.7	118.7	-1.35	-1.35
GRAND TOTAL EXCL ALCOHOL	100.0	102.1	111.3	114.1	113.2	112.5	112.5	112.5	112.5	116.4	116.4	-1.21	-1.21
CEREALS	100.0	95.0	100.0	101.3	101.3	101.3	101.3	101.3	101.3	115.4	115.4	-0.82	-1.39
ROOTS AND TUBERS	100.0	99.0	99.0	102.7	102.7	102.7	102.7	102.7	102.7	116.4	116.4	-1.35	-1.35
SUGARS AND HONEY	100.0	100.7	100.7	100.7	100.7	100.7	100.7	100.7	100.7	117.9	117.9	-0.37	-1.09
PULSES	100.0	94.3	91.4	91.4	91.4	91.4	91.4	91.4	91.4	109.7	109.7	-1.19	-1.19
HUITS AND OIL SEEDS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	114.7	114.7	-0.93	-0.93
VEGETABLES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	114.7	114.7	-0.93	-0.93
FRUIT	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	117.9	117.9	-0.22	-0.22
MEAT AND OFFALS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	112.6	112.6	-2.36	-2.36
Eggs	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	126.6	126.6	-2.11	-2.11
FISH AND SEAFOOD	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	119.5	119.5	-0.91	-0.91
MILK	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	119.5	119.5	-0.82	-0.82
OILS AND FATS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	108.0	108.0	-0.28	-0.28
VEGETABLE OILS AND FATS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	112.6	112.6	-1.02	-1.02
ANIMAL OILS AND FATS	100.0	99.2	101.9	101.9	101.9	101.9	101.9	101.9	101.9	115.5	115.5	-0.23	-0.23
ALCOHOLIC BEVERAGES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.6	97.6	-0.76	-0.76

APPENDIX K (Contd.)

Appendix K.4 - Indices of Per Capita Food Supply and Annual Rates of Growth - Oceania											
GRANDEURS (kg/AL)											
GRAND TOTAL											
VEGETABLE PRODUCTS	161.3	164.6	171.7	171.1	172.7	197.1	197.2	197.3	197.4	212.0	212.0
ANIMAL PRODUCTS	189.0	196.7	160.5	162.2	161.1	167.2	161.2	161.7	161.8	165.3	165.3
GRAND TOTAL EXCL ALCOHOL	189.0	192.4	163.5	166.8	166.8	196.2	197.7	198.9	199.0	202.2	202.2
CEREALS	189.0	190.6	190.6	191.7	191.7	191.9	192.2	192.5	192.7	194.4	194.4
ROOTS AND TUBERS	189.0	190.2	192.8	192.3	192.3	198.3	193.4	195.9	197.2	199.3	199.3
SUGARS AND HONEY	189.0	191.4	191.3	192.6	192.6	191.9	191.4	192.5	193.2	194.9	194.9
PULSES	189.0	199.4	199.9	198.7	198.7	193.9	192.5	192.2	192.5	193.4	193.4
NUTS AND OIL SEEDS	189.0	199.2	131.3	127.1	129.9	131.7	118.8	128.6	128.6	129.0	129.0
VEGETABLES	189.0	199.6	119.9	160.0	161.1	197.9	195.8	194.5	194.5	193.9	193.9
FRUIT	189.0	193.5	193.5	194.6	194.6	195.6	196.3	193.6	192.7	191.5	191.5
MEAT AND OFFALS	189.0	199.1	191.6	191.6	191.6	193.5	194.3	194.3	194.3	194.3	194.3
Eggs	189.0	192.4	110.1	110.1	110.1	113.2	114.3	114.3	114.3	115.3	115.3
FISH AND SEAFOOD	189.0	189.7	198.7	198.7	198.7	192.9	191.6	192.7	192.7	193.5	193.5
MILK	189.0	182.0	194.0	194.0	194.0	194.7	194.2	195.5	195.5	196.9	196.9
OILS AND FATS	189.0	196.6	196.6	197.7	197.7	193.5	197.6	197.6	197.6	198.5	198.5
VEGETABLE OILS AND FATS	189.0	189.6	160.0	179.7	179.7	153.5	175.9	184.5	184.5	187.0	187.0
ANIMAL OILS AND FATS	189.0	189.9	189.9	173.9	173.9	171.7	171.7	171.7	171.7	171.4	171.4
ALCOHOLIC BEVERAGES	189.0	193.9	121.1	131.6	131.6	122.7	126.7	131.1	137.0	139.0	139.0
PROTEIN (g)											
GRAND TOTAL											
VEGETABLE PRODUCTS	189.0	191.4	97.1	162.9	162.9	164.2	169.9	169.9	169.9	171.0	171.0
ANIMAL PRODUCTS	189.0	192.3	164.1	164.4	164.4	165.5	166.2	165.5	165.5	165.5	165.5
GRAND TOTAL EXCL ALCOHOL	189.0	192.1	191.5	192.6	192.6	191.9	192.6	192.6	192.6	192.6	192.6
CEREALS	189.0	196.1	92.3	92.3	92.3	97.6	92.8	95.3	95.3	97.1	97.1
ROOTS AND TUBERS	189.0	195.3	121.6	166.7	166.7	117.9	122.9	121.3	121.3	121.3	121.3
SUGARS AND HONEY	189.0	191.2	125.4	125.4	125.4	125.4	125.4	125.4	125.4	125.4	125.4
PULSES	189.0	199.5	86.1	126.5	126.5	104.1	124.4	125.5	125.5	125.5	125.5
NUTS AND OIL SEEDS	189.0	197.6	147.3	147.3	147.3	152.1	160.4	144.5	144.5	144.5	144.5
VEGETABLES	189.0	188.1	162.6	185.9	185.9	195.9	195.9	194.3	194.3	194.3	194.3
FRUIT	189.0	193.5	197.8	145.6	145.6	197.5	188.4	193.2	193.2	193.2	193.2
Eggs	189.0	190.1	162.6	195.2	195.2	181.9	185.0	191.9	191.9	193.5	193.5
FISH AND SEAFOOD	189.0	192.9	119.5	112.0	112.0	112.0	114.5	111.2	111.2	112.2	112.2
MILK	189.0	192.4	111.9	111.9	111.9	114.8	113.6	113.6	113.6	114.6	114.6
OILS AND FATS	189.0	194.1	103.4	112.0	112.0	105.1	108.4	110.2	110.2	111.9	111.9
VEGETABLE OILS AND FATS	189.0	184.6	69.4	61.7	61.7	62.7	63.0	60.9	61.1	61.1	61.1
ANIMAL OILS AND FATS	189.0	180.6	83.8	59.2	59.2	57.6	61.2	59.1	59.1	58.8	58.8
ALCOHOLIC BEVERAGES	189.0	190.3	105.2	188.7	188.7	128.5	121.7	122.5	127.5	133.0	133.0
FAT (%)											
GRAND TOTAL											
VEGETABLE PRODUCTS	189.0	192.7	95.2	99.2	99.2	102.2	98.8	96.5	96.5	91.1	91.1
ANIMAL PRODUCTS	189.0	193.5	136.7	147.8	137.4	147.5	144.1	151.8	151.8	156.5	156.5
GRAND TOTAL EXCL ALCOHOL	189.0	193.7	95.2	99.2	99.2	102.2	98.8	96.5	96.5	91.1	91.1
CEREALS	189.0	193.7	95.2	99.2	99.2	102.2	102.2	102.2	102.2	102.2	102.2
ROOTS AND TUBERS	189.0	195.2	95.8	94.5	94.5	94.5	98.0	95.8	95.8	94.1	94.1
SUGARS AND HONEY	189.0	195.2	121.6	109.0	109.0	118.2	118.2	116.2	116.2	114.0	114.0
PULSES	189.0	197.6	147.3	147.3	147.3	147.3	147.3	147.3	147.3	147.3	147.3
VEGETABLES	189.0	197.6	147.3	147.3	147.3	147.3	147.3	147.3	147.3	147.3	147.3
FRUIT	189.0	197.8	145.6	145.6	145.6	145.6	148.4	148.4	148.4	148.4	148.4
Eggs	189.0	190.1	162.6	195.2	195.2	181.9	185.0	191.9	191.9	193.5	193.5
FISH AND SEAFOOD	189.0	192.9	119.5	112.0	112.0	112.0	114.5	111.2	111.2	112.2	112.2
MILK	189.0	192.4	111.9	111.9	111.9	114.8	113.6	113.6	113.6	114.6	114.6
OILS AND FATS	189.0	194.1	103.4	112.0	112.0	105.1	108.4	110.2	110.2	111.9	111.9
VEGETABLE OILS AND FATS	189.0	184.6	69.4	61.7	61.7	62.7	63.0	60.9	61.1	61.1	61.1
ANIMAL OILS AND FATS	189.0	180.6	83.8	59.2	59.2	57.6	61.2	59.1	59.1	58.8	58.8
ALCOHOLIC BEVERAGES	189.0	190.3	105.2	188.7	188.7	128.5	121.7	122.5	127.5	133.0	133.0

Appendix K.5 :: Indices of Per Capita Food Supply and Annual Rates of Growth = Other Developed Market Economies

FAT CG1		FAT CG2	
GRAND TOTAL	61-163	64-166	64-166
VEGETABLE PRODUCTS	106-0	102-0	102-0
ANIMAL PRODUCTS	106-0	99-3	96-0
GRAND TOTAL ELEM ALCOHOL	106-0	102-1	112-0
CERELS	106-0	99-7	96-0
ROOTS AND TUBERS	106-0	89-3	77-8
SUGARS AND HONEY	106-0	96-5	66-1
PULSES	106-0	95-5	92-3
NUTS AND OIL SEEDS	106-0	95-3	100-0
VEGETABLES	106-0	111-3	114-0
FRUIT	106-0	128-0	162-0
MEAT AND OFFALS	106-0	119-9	132-4
ECCS	106-0	127-9	126-4
FISH AND SEAFOOD	106-0	99-4	126-4
MILK	106-0	124-7	175-0
OILS AND FATS	106-0	113-5	150-0
VEGETABLE OILS AND FATS	106-0	115-8	181-1
ANIMAL OILS AND FATS	106-0	114-9	128-6
ALCOHOLIC BEVERAGES	106-0	121-6	150-2
GRAND TOTAL	61-163	64-166	64-166
VEGETABLE PRODUCTS	106-0	117-3	145-7
ANIMAL PRODUCTS	106-0	112-9	133-6
GRAND TOTAL ELEM ALCOHOL	106-0	123-5	162-0
CERELS	106-0	117-9	146-7
ROOTS AND TUBERS	106-0	81-3	60-2
SUGARS AND HONEY	106-0	96-0	91-7
PULSES	106-0	100-4	109-3
NUTS AND OIL SEEDS	106-0	112-0	114-1
VEGETABLES	106-0	115-6	144-7
FRUIT	106-0	135-0	181-4
MEAT AND OFFALS	106-0	127-4	20-2
ECCS	106-0	109-0	109-0
FISH AND SEAFOOD	106-0	109-3	116-0
MILK	106-0	114-1	132-3
OILS AND FATS	106-0	122-6	143-4
VEGETABLE OILS AND FATS	106-0	122-6	153-3
ANIMAL OILS AND FATS	106-0	128-5	151-6
ALCOHOLIC BEVERAGES			

APPENDIX K (Contd.)

Appendix K.6 - Indices of Per Caput Food Supply and Annual Rates of Growth - Eastern Europe and USSR

CALORIES (KCAL)		61-63	64-66	69-71	72-74	1971	1972	1973	1974	70-62	73-75	73-76
GRAND TOTAL		100.0	101.0	105.5	107.0	106.0	105.4	107.1	108.4	9.67	9.45	6.51
VEGETABLE PRODUCTS		100.0	100.9	149.9	100.7	161.0	100.1	101.1	101.6	0.11	-0.06	0.07
ANIMAL PRODUCTS		100.0	101.3	120.3	127.1	122.3	122.6	126.4	132.3	2.34	1.84	2.20
GRAND TOTAL EXCL ALCOHOL		100.0	100.8	161.7	163.0	102.1	161.6	103.1	104.3	0.21	0.42	0.27
CEREALS		100.0	93.2	93.4	90.6	92.7	91.7	90.6	89.6	-0.85	-1.90	-0.85
ROOTS AND TUBERS		100.0	98.1	91.8	86.1	90.8	85.9	86.7	85.8	-1.97	-1.91	-1.35
SUGARS AND HONEY		100.0	105.8	120.6	127.7	123.2	128.4	128.2	129.6	2.37	1.93	2.25
PULSES		100.0	106.1	105.3	107.5	105.2	101.9	111.4	109.1	0.63	0.68	0.66
NUTS AND OIL SEEDS		100.0	119.4	108.5	168.5	90.9	115.9	99.5	110.1	1.63	-0.00	0.75
VEGETABLES		100.0	119.7	113.8	126.1	115.3	114.1	124.3	129.8	1.62	3.49	2.13
FRUIT		100.0	114.6	132.9	136.1	135.1	128.5	147.2	135.6	3.42	0.78	2.84
MEAT AND OFFAL		100.0	102.8	120.5	133.1	126.3	130.1	129.5	130.8	2.36	3.38	2.64
EGGS		100.0	101.8	100.5	153.3	140.8	146.3	152.0	141.7	3.39	3.91	3.74
FISH AND SEAFOOD		100.0	111.6	135.1	136.9	137.8	146.6	158.1	162.1	3.84	5.11	4.18
MILK		100.0	97.4	124.2	119.9	120.8	116.2	118.7	124.9	2.74	-1.18	1.67
OILS AND FATS		100.0	106.0	110.4	119.6	113.3	113.7	121.4	123.6	1.26	2.64	1.64
VEGETABLE OILS AND FATS		100.0	105.4	111.5	119.4	113.9	114.2	118.2	125.4	1.37	2.31	1.62
ANIMAL OILS AND FATS		100.0	103.4	109.6	119.4	117.7	112.9	124.4	121.2	1.13	2.92	1.63
ALCOHOLIC BEVERAGES		100.0	107.6	128.2	139.3	136.2	133.3	142.0	143.7	3.59	1.67	2.06
PROTEIN (%)		61-63	64-66	69-71	72-74	1971	1972	1973	1974	70-62	73-75	73-76
GRAND TOTAL		100.0	100.6	167.3	109.3	107.4	107.4	105.8	111.6	0.88	0.61	0.81
VEGETABLE PRODUCTS		100.0	99.4	95.5	93.6	94.4	93.9	92.9	93.1	-0.37	-0.67	-0.68
ANIMAL PRODUCTS		100.0	102.2	124.7	132.5	126.5	127.4	130.9	139.1	2.79	2.04	2.59
GRAND TOTAL EXCL ALCOHOL		100.0	102.5	110.0	112.2	110.4	110.3	111.8	114.6	1.23	0.69	1.06
CEREALS		100.0	99.2	93.2	90.4	92.4	91.5	92.3	89.3	-0.88	-1.91	-0.92
ROOTS AND TUBERS		100.0	98.1	91.7	86.2	90.7	86.6	86.8	85.8	-1.08	-2.95	-1.38
SUGARS AND HONEY		100.0	103.4	91.6	93.4	92.7	93.2	92.9	86.9	-1.05	0.62	-0.62
PULSES		100.0	105.7	104.3	106.5	104.0	101.6	109.3	108.6	0.92	0.71	0.57
NUTS AND OIL SEEDS		100.0	109.6	112.5	108.6	84.8	129.3	85.3	105.4	1.48	-1.18	0.75
VEGETABLES		100.0	109.3	112.7	124.9	114.9	111.7	134.4	128.6	1.31	3.49	2.04
FRUIT		100.0	115.3	121.3	138.5	137.1	127.3	148.3	139.9	3.46	1.79	3.00
MEAT AND OFFAL		100.0	102.6	121.8	133.0	120.9	128.7	130.6	141.1	2.47	3.19	2.60
EGGS		100.0	101.3	129.7	152.9	139.8	145.3	152.2	161.2	3.31	5.63	3.94
FISH AND SEAFOOD		100.0	112.9	128.6	125.6	125.6	138.6	147.6	155.0	3.19	4.41	3.52
MILK		100.0	98.6	125.7	123.3	125.2	118.5	123.5	128.5	2.50	-0.59	1.92
OILS AND FATS		100.0	102.7	120.7	121.9	118.3	116.1	122.2	125.3	1.28	3.26	2.81
VEGETABLE OILS AND FATS		100.0	113.6	127.6	141.7	135.2	134.9	137.7	150.7	3.10	3.96	2.22
ANIMAL OILS AND FATS		100.0	101.2	106.3	117.0	111.7	111.0	120.3	119.1	0.86	3.17	1.44
ALCOHOLIC BEVERAGES		100.0	109.3	133.6	151.0	149.1	144.7	152.7	156.4	3.69	4.16	3.82
FAT (%)		61-63	64-66	69-71	72-74	1971	1972	1973	1974	70-62	73-75	73-76
GRAND TOTAL		100.0	102.2	113.6	122.8	117.8	118.6	122.3	127.9	1.93	2.63	1.85
VEGETABLE PRODUCTS		100.0	106.6	106.0	113.3	109.9	110.8	113.6	117.3	0.37	1.61	1.14
ANIMAL PRODUCTS		100.0	101.6	119.0	127.0	121.7	122.4	126.6	131.9	2.15	2.26	2.20
GRAND TOTAL EXCL ALCOHOL		100.0	103.2	115.6	122.0	117.9	118.6	122.3	127.5	1.83	2.63	1.85
CEREALS		100.0	97.7	92.4	93.6	91.6	90.3	89.9	88.6	-0.58	-1.03	-0.57
ROOTS AND TUBERS		100.0	99.1	91.7	86.2	90.8	90.6	86.7	85.9	-1.47	-2.04	-1.30
SUGARS AND HONEY		100.0	106.2	102.3	104.9	102.7	99.3	106.3	106.2	0.31	0.78	0.44
PULSES		100.0	110.7	106.1	108.5	96.6	119.8	103.2	119.9	0.75	0.72	0.74
NUTS AND OIL SEEDS		100.0	109.6	106.1	124.3	113.9	112.0	133.2	127.8	1.64	3.49	2.95
VEGETABLES		100.0	119.0	143.4	151.9	132.3	134.2	168.3	151.3	4.61	1.94	3.80
FRUIT		100.0	102.9	120.0	132.8	126.1	130.1	123.1	139.3	2.31	3.43	2.61
MEAT AND OFFAL		100.0	102.9	129.8	152.8	139.7	145.2	152.1	161.0	3.31	5.59	3.92
EGGS		100.0	105.6	140.2	176.3	154.3	163.6	175.3	189.7	5.04	5.55	5.27
FISH AND SEAFOOD		100.0	97.2	136.1	119.7	120.6	115.9	118.4	124.9	2.74	-1.20	1.65
MILK		100.0	105.3	116.5	119.5	118.3	113.6	121.4	123.6	1.26	2.54	1.60
OILS AND FATS		100.0	108.6	111.6	119.5	119.9	114.3	118.3	123.5	1.38	2.32	1.65
VEGETABLE OILS AND FATS		100.0	103.4	109.6	119.5	112.7	112.9	124.4	121.3	1.18	2.93	1.66
ANIMAL OILS AND FATS		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00	0.00	0.00
ALCOHOLIC BEVERAGES		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00	0.00	0.00

Appendix K.7 - Indices of Per Caput Food Supply and Annual Rates of Growth - All Developed Countries

CALORIES (KCAL)	61-63	64-66	68-71	72-74	1971	1972	1973	1974	70/62	73/70	73/62
GRAND TOTAL	199.0	191.2	195.1	166.6	105.7	105.9	106.9	107.0	0.62	0.50	0.39
VEGETABLE PRODUCTS	190.0	169.7	191.7	193.1	192.1	102.4	103.9	102.0	0.24	0.38	0.26
ANIMAL PRODUCTS	190.0	192.5	112.6	115.2	114.4	114.5	114.3	116.9	1.50	0.76	1.36
GRAND TOTAL EXCL ALCOHOL	190.0	166.9	162.3	194.6	103.9	104.1	104.8	104.9	0.41	0.42	0.41
CEREALS	108.0	97.5	92.5	70.4	51.6	51.3	50.6	50.8	-0.97	-0.69	-0.99
ROOTS AND TUBERS	100.0	96.1	90.1	85.5	88.6	85.9	85.7	84.8	-1.30	-1.73	-1.42
SUGARS AND HONEY	100.0	103.8	114.4	120.6	116.2	117.6	121.4	120.9	1.69	1.61	1.67
PULSES	100.0	99.1	94.9	94.3	92.5	93.8	96.5	92.7	-6.77	0.12	-0.53
NUTS AND OIL SEEDS	100.0	103.1	108.1	112.7	104.9	113.5	112.3	112.4	6.98	1.41	1.10
VEGETABLES	100.0	104.6	110.3	114.9	111.8	109.4	117.4	117.7	1.23	1.34	1.27
FRUIT	100.0	106.6	119.1	120.7	126.3	117.3	125.9	119.8	2.21	0.45	1.73
MEAT AND OFFAL	100.0	104.8	118.9	124.4	123.7	124.3	121.4	127.5	2.19	1.52	2.01
Eggs	100.0	103.4	119.5	123.4	123.1	123.9	122.4	123.9	2.25	1.09	1.93
FISH AND SEAFOOD	100.0	105.4	120.1	132.1	122.7	127.4	133.9	134.9	2.32	3.21	2.56
MILK	100.0	99.9	108.5	107.6	107.4	105.9	107.4	108.5	1.02	-0.29	0.66
OILS AND FATS	100.0	104.5	112.7	117.4	114.1	115.5	119.1	117.7	1.51	1.37	1.47
VEGETABLE OILS AND FATS	100.0	107.9	121.1	130.3	124.3	127.6	132.6	130.7	2.43	2.46	2.44
ANIMAL OILS AND FATS	100.0	109.8	103.8	103.8	103.4	102.7	104.8	103.9	0.47	-0.01	0.34
ALCOHOLIC BEVERAGES	100.0	108.7	122.2	129.9	124.2	124.9	131.9	133.1	2.84	2.07	2.41
PROTEIN (%)	61-63	64-66	68-71	72-74	1971	1972	1973	1974	70/62	73/70	73/62
GRAND TOTAL	100.0	101.2	105.2	107.3	106.2	106.8	107.0	108.0	0.70	0.47	0.64
VEGETABLE PRODUCTS	100.0	98.6	95.4	94.4	94.7	94.7	94.8	92.8	-0.58	-0.35	-0.32
ANIMAL PRODUCTS	100.0	103.9	116.4	129.5	118.2	119.3	119.8	122.8	1.92	1.16	1.71
GRAND TOTAL EXCL ALCOHOL	100.0	101.2	102.7	107.8	106.2	106.7	107.0	108.9	0.76	0.54	0.68
CEREALS	100.0	97.5	92.4	96.4	91.5	91.2	90.5	89.4	-0.99	-0.73	-0.92
ROOTS AND TUBERS	100.0	94.6	92.6	87.7	90.8	88.0	87.8	87.4	-1.04	-1.57	-1.19
SUGARS AND HONEY	100.0	97.1	86.8	93.0	88.6	89.6	87.8	92.2	-1.19	1.35	-0.66
PULSES	100.0	99.0	94.1	94.4	92.7	94.2	96.2	92.7	-0.75	0.98	-0.33
NUTS AND OIL SEEDS	100.0	101.3	108.2	112.3	103.6	114.7	110.3	111.9	0.99	1.24	1.66
VEGETABLES	100.0	104.9	109.3	113.4	119.5	107.8	116.2	116.3	1.16	1.28	1.15
FRUIT	100.0	106.0	120.1	126.1	125.6	122.9	122.1	124.2	2.37	1.36	2.09
MEAT AND OFFAL	100.0	106.3	121.5	127.2	125.1	126.1	124.6	130.3	2.46	1.55	2.21
Eggs	100.0	103.4	119.2	123.4	122.6	123.9	122.2	124.0	2.22	1.17	1.93
FISH AND SEAFOOD	100.0	105.1	116.4	125.7	117.9	121.3	127.1	128.7	1.91	2.61	2.10
MILK	100.0	109.7	109.9	110.9	109.1	109.0	110.1	111.0	1.18	0.65	0.97
OILS AND FATS	100.0	101.4	103.7	107.0	106.5	105.8	108.1	108.2	0.45	1.07	0.62
VEGETABLE OILS AND FATS	100.0	106.5	112.6	117.7	116.1	117.4	117.4	118.2	1.34	1.36	1.49
ANIMAL OILS AND FATS	100.0	99.4	99.9	102.7	101.9	99.7	104.3	104.2	-0.01	0.54	0.25
ALCOHOLIC BEVERAGES	100.0	111.8	132.2	145.5	136.4	140.1	147.0	143.3	3.85	3.24	3.47
FAT (%)	61-63	64-66	68-71	72-74	1971	1972	1973	1974	70/62	73/70	73/62
GRAND TOTAL	100.0	103.5	113.1	117.4	115.4	116.4	117.2	118.6	1.58	1.19	1.47
VEGETABLE PRODUCTS	100.0	106.2	115.9	123.1	118.6	121.2	124.9	127.1	1.96	2.02	1.29
ANIMAL PRODUCTS	100.0	102.4	112.3	115.0	114.4	114.4	113.9	116.8	1.44	0.81	1.28
GRAND TOTAL EXCL ALCOHOL	100.0	103.5	113.3	117.4	115.4	116.4	117.2	118.6	1.38	1.13	1.47
CEREALS	100.0	97.7	92.8	99.9	92.0	91.9	90.9	90.8	-6.93	-0.66	-0.86
ROOTS AND TUBERS	100.0	95.6	96.2	88.2	88.9	88.1	86.4	85.6	-1.28	-1.61	-1.37
SUGARS AND HONEY	100.0	100.6	98.3	95.8	97.9	97.9	96.8	96.2	-0.21	-0.58	-0.39
PULSES	100.0	99.4	92.5	94.6	98.4	98.3	96.4	91.4	-0.98	0.37	-0.56
NUTS AND OIL SEEDS	100.0	104.6	116.2	115.9	108.4	116.0	115.9	113.7	1.22	1.70	1.35
VEGETABLES	100.0	105.1	116.4	114.9	111.8	105.3	117.7	117.3	1.24	1.33	1.27
FRUIT	100.0	106.3	123.4	129.4	125.3	123.5	134.6	129.6	2.67	1.58	2.37
MEAT AND OFFAL	100.0	104.4	118.2	123.6	123.4	123.6	120.5	126.6	2.11	1.59	1.95
Eggs	100.0	103.4	119.1	123.3	122.6	123.8	122.2	123.9	2.21	1.15	1.92
FISH AND SEAFOOD	100.0	106.2	126.0	141.5	129.8	135.9	143.0	145.6	2.93	3.95	3.21
MILK	100.0	99.9	109.1	109.7	109.1	107.6	109.3	119.3	1.10	-0.12	0.76
OILS AND FATS	100.0	104.4	112.7	117.4	114.1	115.5	115.1	117.7	1.53	1.37	1.47
VEGETABLE OILS AND FATS	100.0	107.9	121.2	130.4	124.3	127.6	132.7	130.8	2.43	2.47	2.44
ANIMAL OILS AND FATS	100.0	109.8	103.0	103.8	103.4	102.3	104.8	103.8	0.42	-0.01	0.34
ALCOHOLIC BEVERAGES	100.0	111.8	132.2	145.5	136.4	140.1	147.0	143.3	3.85	3.24	3.47

APPENDIX K (Contd.)

Appendix K.8 - Indices of Per Capita Food Supply and Annual Rates of Growth - Developing Market Economies						
Category (RC01)	1961-63	1965-67	1970-71	1975-76	1980-81	1985-86
Calories (RC01)	100.0	100.0	100.0	100.0	100.0	100.0

Appendix K.9 - Indices of Per Caput Food Supply and Annual Rates of Growth in African

APPENDIX F (Contd.)

Appendix K.11 - Indices of Per Caput Food Supply and Annual Rates of Growth w/ Near East

CALORIES (KCAL)		PROTEIN (G)		FAT (G)	
GRAND TOTAL	644-46	697-71	72-74	197-1	1972
VEGETABLE PRODUCTS	100-0	162-2	163-3	105-2	107-5
ANIMAL PRODUCTS	100-0	162-3	163-3	105-3	107-5
GRAND TOTAL ALCOHOL	100-0	161-1	163-2	104-3	107-2
CEREALS	100-0	162-2	163-2	104-3	107-2
ROOTS AND TUBERS	100-0	160-9	162-5	101-7	103-3
SUGARS AND HONEY	100-0	151-4	189-6	92-3	92-3
PULSES	100-0	163-3	97-7	59-6	138-6
NUTS AND OIL SEEDS	100-0	160-7	96-0	101-2	106-7
FRUIT	100-0	160-6	116-4	115-5	116-4
MENAT AND OFFAL	100-0	155-5	93-8	92-4	92-8
ECSIS	100-0	144-1	145-5	142-4	149-3
FISH AND SEAFOOD	100-0	161-0	145-5	142-4	149-3
MILK	100-0	165-9	145-5	116-7	120-4
OILS AND FATS	100-0	95-4	164-7	121-6	129-6
VEGETABLE OILS AND FATS	100-0	116-5	134-0	126-7	134-9
ANIMAL OILS AND FATS	100-0	116-5	134-0	126-7	134-9
ALCOHOLIC BEVERAGES	100-0	98-8	101-0	103-7	106-5
GRAND TOTAL	644-43	666-6	697-61	72-74	1973
VEGETABLE PRODUCTS	100-0	160-9	161-2	101-8	102-5
ANIMAL PRODUCTS	100-0	161-0	161-2	101-8	102-5
GRAND TOTAL ALCOHOL	100-0	160-7	161-7	101-5	102-5
CEREALS	100-0	160-9	162-4	102-2	102-3
ROOTS AND TUBERS	100-0	160-1	161-1	101-3	102-1
SUGARS AND HONEY	100-0	160-5	162-6	97-7	100-5
PULSES	100-0	121-2	91-8	23-3	274-5
VEGETABLES	100-0	160-5	161-4	126-4	166-6
FRUIT	100-0	95-7	105-7	101-9	105-3
MENAT AND OFFAL	100-0	116-1	136-2	117-0	136-5
ECSIS	100-0	114-0	134-0	112-4	134-9
FISH AND SEAFOOD	100-0	161-2	161-2	101-7	101-7
MILK	100-0	160-2	97-2	98-4	116-4
OILS AND FATS	100-0	95-4	161-2	116-4	120-4
VEGETABLE OILS AND FATS	100-0	116-3	149-4	116-4	120-4
ANIMAL OILS AND FATS	100-0	116-3	149-4	116-4	120-4
ALCOHOLIC BEVERAGES	100-0	98-8	101-0	103-7	106-5
GRAND TOTAL	644-43	644-56	697-71	72-74	1971
VEGETABLE PRODUCTS	100-0	160-7	161-2	115-3	115-3
ANIMAL PRODUCTS	100-0	160-8	161-3	115-4	115-3
GRAND TOTAL ALCOHOL	100-0	160-5	161-2	115-2	115-2
CEREALS	100-0	160-7	161-2	115-3	115-3
ROOTS AND TUBERS	100-0	160-1	161-1	114-3	114-3
SUGARS AND HONEY	100-0	160-5	161-3	121-5	121-5
PULSES	100-0	121-2	91-8	23-3	274-5
VEGETABLES	100-0	160-5	161-4	126-4	166-6
FRUIT	100-0	95-7	105-7	101-9	105-3
MENAT AND OFFAL	100-0	116-1	136-2	117-0	136-5
ECSIS	100-0	114-0	134-0	112-4	134-9
FISH AND SEAFOOD	100-0	161-2	161-2	101-7	101-7
MILK	100-0	160-2	97-2	98-4	116-4
OILS AND FATS	100-0	95-4	161-2	116-4	120-4
VEGETABLE OILS AND FATS	100-0	116-3	149-4	116-4	120-4
ANIMAL OILS AND FATS	100-0	116-3	149-4	116-4	120-4
ALCOHOLIC BEVERAGES	100-0	98-8	101-0	103-7	106-5
GRAND TOTAL	644-43	644-56	697-71	72-74	1972
VEGETABLE PRODUCTS	100-0	160-7	161-2	115-3	115-3
ANIMAL PRODUCTS	100-0	160-8	161-3	115-4	115-3
GRAND TOTAL ALCOHOL	100-0	160-5	161-2	115-2	115-2
CEREALS	100-0	160-7	161-2	115-3	115-3
ROOTS AND TUBERS	100-0	160-1	161-1	114-3	114-3
SUGARS AND HONEY	100-0	160-5	161-3	121-5	121-5
PULSES	100-0	121-2	91-8	23-3	274-5
VEGETABLES	100-0	160-5	161-4	126-4	166-6
FRUIT	100-0	95-7	105-7	101-9	105-3
MENAT AND OFFAL	100-0	116-1	136-2	117-0	136-5
ECSIS	100-0	114-0	134-0	112-4	134-9
FISH AND SEAFOOD	100-0	161-2	161-2	101-7	101-7
MILK	100-0	160-2	97-2	98-4	116-4
OILS AND FATS	100-0	95-4	161-2	116-4	120-4
VEGETABLE OILS AND FATS	100-0	116-3	149-4	116-4	120-4
ANIMAL OILS AND FATS	100-0	116-3	149-4	116-4	120-4
ALCOHOLIC BEVERAGES	100-0	98-8	101-0	103-7	106-5
GRAND TOTAL	644-43	644-56	697-71	72-74	1973
VEGETABLE PRODUCTS	100-0	160-7	161-2	115-3	115-3
ANIMAL PRODUCTS	100-0	160-8	161-3	115-4	115-3
GRAND TOTAL ALCOHOL	100-0	160-5	161-2	115-2	115-2
CEREALS	100-0	160-7	161-2	115-3	115-3
ROOTS AND TUBERS	100-0	160-1	161-1	114-3	114-3
SUGARS AND HONEY	100-0	160-5	161-3	121-5	121-5
PULSES	100-0	121-2	91-8	23-3	274-5
VEGETABLES	100-0	160-5	161-4	126-4	166-6
FRUIT	100-0	95-7	105-7	101-9	105-3
MENAT AND OFFAL	100-0	116-1	136-2	117-0	136-5
ECSIS	100-0	114-0	134-0	112-4	134-9
FISH AND SEAFOOD	100-0	161-2	161-2	101-7	101-7
MILK	100-0	160-2	97-2	98-4	116-4
OILS AND FATS	100-0	95-4	161-2	116-4	120-4
VEGETABLE OILS AND FATS	100-0	116-3	149-4	116-4	120-4
ANIMAL OILS AND FATS	100-0	116-3	149-4	116-4	120-4
ALCOHOLIC BEVERAGES	100-0	98-8	101-0	103-7	106-5

APPENDIX K (Contd.)

APPENDIX K-12 - Indices of Per Capita Food Supply and Annual Rates of Growth - Far East

CALORIES (KCAL)		64-65	65-66	66-67	67-71	72-74	75-76	77-78	78-79	79-80	80-81
GRAND TOTAL		100.0	99.5	102.9	104.5	104.2	102.3	99.3	102.7	102.7	103.6
VEGETABLE PRODUCTS		109.0	102.7	102.7	104.0	102.3	102.3	102.3	102.3	102.3	102.3
ANIMAL PRODUCTS		109.0	95.9	106.1	106.1	107.4	107.8	106.9	109.9	107.4	107.4
GRAND TOTAL EXCL. ALCOHOL		100.0	95.9	102.3	102.3	104.1	104.1	104.1	108.3	109.9	107.4
GRAINS		100.0	100.1	105.3	105.3	107.9	107.9	107.9	106.7	106.7	106.7
ROOTS AND TUBERS		100.0	95.6	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4
SUGARS AND HONEY		100.0	104.7	108.7	108.7	107.0	106.1	101.8	106.7	106.5	106.5
PULSES		100.0	86.1	78.5	78.5	103.5	103.5	103.5	102.9	96.0	96.0
FRUIT		100.0	92.5	90.7	90.7	91.0	91.0	93.9	83.0	85.1	85.1
VEGETABLE OILS AND FATS		100.0	95.4	97.7	101.5	100.6	100.2	102.4	107.5	107.5	107.5
ANIMAL OILS AND FATS		100.0	99.1	102.9	102.9	103.6	103.6	103.6	102.1	101.9	101.9
ALCOHOLIC BEVERAGES		100.0	102.0	103.3	107.0	104.5	104.5	104.5	102.3	102.3	102.3
PROTEIN (G)		64-65	64-66	65-66	67-71	72-74	75-76	77-78	78-79	79-80	80-81
GRAND TOTAL		100.0	98.1	100.1	100.1	103.1	103.1	103.1	109.5	109.5	109.5
VEGETABLE PRODUCTS		100.0	97.7	100.6	100.6	101.1	101.1	101.1	102.6	102.6	102.6
ANIMAL PRODUCTS		100.0	102.7	110.6	113.7	112.3	111.7	112.3	115.3	115.3	115.3
GRAND TOTAL EXCL. ALCOHOL		100.0	98.4	101.9	101.9	101.9	101.9	101.9	100.5	100.5	100.5
GRAINS		100.0	104.5	106.1	105.8	107.9	107.1	106.5	107.7	107.4	107.4
FISH AND SEAFOOD		100.0	107.3	97.2	93.7	95.3	92.6	92.6	94.4	94.4	94.4
MILK		100.0	103.3	97.2	88.2	93.5	83.5	83.5	95.6	95.6	95.6
OILS AND FATS		100.0	94.5	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2
VEGETABLE OILS AND FATS		100.0	95.0	98.4	95.2	95.2	95.2	95.2	95.2	95.2	95.2
ANIMAL OILS AND FATS		100.0	98.1	103.2	106.1	106.1	106.1	106.1	106.1	106.1	106.1
ALCOHOLIC BEVERAGES		100.0	102.8	103.2	106.4	106.4	106.4	106.4	106.7	106.7	106.7
PROTEIN (G)		64-65	64-66	65-66	67-71	72-74	75-76	77-78	78-79	79-80	80-81
GRAND TOTAL		100.0	98.1	100.1	100.1	103.1	103.1	103.1	109.5	109.5	109.5
VEGETABLE PRODUCTS		100.0	97.7	100.6	100.6	101.1	101.1	101.1	102.6	102.6	102.6
ANIMAL PRODUCTS		100.0	102.7	110.6	113.7	112.3	111.7	112.3	115.3	115.3	115.3
GRAND TOTAL EXCL. ALCOHOL		100.0	98.4	101.9	101.9	101.9	101.9	101.9	100.5	100.5	100.5
GRAINS		100.0	104.5	106.1	105.8	107.9	107.1	106.5	107.7	107.4	107.4
FISH AND SEAFOOD		100.0	107.3	97.2	93.7	95.3	92.6	92.6	94.4	94.4	94.4
MILK		100.0	103.3	97.2	88.2	93.5	83.5	83.5	95.6	95.6	95.6
OILS AND FATS		100.0	94.5	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2
VEGETABLE OILS AND FATS		100.0	95.0	98.4	95.2	95.2	95.2	95.2	95.2	95.2	95.2
ANIMAL OILS AND FATS		100.0	98.1	103.2	106.1	106.1	106.1	106.1	106.1	106.1	106.1
ALCOHOLIC BEVERAGES		100.0	102.8	103.2	106.4	106.4	106.4	106.4	106.7	106.7	106.7
PROTEIN (G)		64-65	64-66	65-66	67-71	72-74	75-76	77-78	78-79	79-80	80-81
GRAND TOTAL		100.0	97.6	100.3	100.3	102.3	102.3	102.3	109.3	109.3	109.3
VEGETABLE PRODUCTS		100.0	96.8	97.7	94.5	100.0	99.6	99.6	102.4	102.4	102.4
ANIMAL PRODUCTS		100.0	106.0	108.3	108.0	109.7	110.0	109.6	109.4	109.4	109.4
GRAND TOTAL EXCL. ALCOHOL		100.0	97.6	100.3	100.3	102.3	102.3	102.3	109.3	109.3	109.3
GRAINS		100.0	106.0	108.3	108.0	109.7	110.0	109.6	109.4	109.4	109.4
ROOTS AND TUBERS		100.0	95.6	97.4	100.3	100.3	102.3	102.3	102.3	102.3	102.3
SUGARS AND HONEY		100.0	101.0	93.0	93.9	75.9	76.9	75.9	76.6	75.7	75.7
PULSES		100.0	98.0	81.9	74.1	62.0	73.6	70.5	63.6	55.9	55.9
HUFS AND OIL SEEDS		100.0	93.0	92.5	89.1	88.5	62.7	91.5	83.0	64.4	64.4
VEGETABLES		100.0	100.0	102.7	107.2	105.9	107.0	106.0	106.9	105.2	105.2
FRUIT		100.0	98.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2
MEAT AND OFFALS		100.0	103.5	105.6	108.1	107.4	107.4	106.3	106.3	106.3	106.3
Eggs		100.0	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6
FISH AND SEAFOOD		100.0	102.8	103.1	103.1	102.8	102.8	102.8	102.8	102.8	102.8
MILK		100.0	98.5	100.7	102.2	100.7	100.7	100.7	101.6	101.6	101.6
OILS AND FATS		100.0	111.4	116.5	112.9	115.6	112.2	119.4	119.4	118.8	118.8
VEGETABLE OILS AND FATS		100.0	98.1	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2
ANIMAL OILS AND FATS		100.0	115.6	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8
ALCOHOLIC BEVERAGES		100.0	107.6	104.3	108.6	107.2	101.3	101.3	102.2	102.2	102.2
PROTEIN (G)		64-65	64-66	65-66	67-71	72-74	75-76	77-78	78-79	79-80	80-81
GRAND TOTAL		100.0	97.6	100.3	100.3	102.3	102.3	102.3	109.3	109.3	109.3
VEGETABLE PRODUCTS		100.0	96.8	97.7	94.5	100.0	99.6	99.6	102.4	102.4	102.4
ANIMAL PRODUCTS		100.0	106.0	108.3	108.0	109.7	110.0	109.6	109.4	109.4	109.4
GRAND TOTAL EXCL. ALCOHOL		100.0	97.6	100.3	100.3	102.3	102.3	102.3	109.3	109.3	109.3
GRAINS		100.0	106.0	108.3	108.0	109.7	110.0	109.6	109.4	109.4	109.4
ROOTS AND TUBERS		100.0	95.6	97.4	100.3	100.3	102.3	102.3	102.3	102.3	102.3
SUGARS AND HONEY		100.0	101.0	91.0	83.9	75.9	76.9	75.9	76.6	75.7	75.7
PULSES		100.0	98.0	81.9	74.1	62.0	73.6	70.5	63.6	55.9	55.9
HUFS AND OIL SEEDS		100.0	93.0	92.5	89.1	88.5	62.7	91.5	83.0	64.4	64.4
VEGETABLES		100.0	100.0	102.7	107.2	105.9	107.0	106.0	106.9	105.2	105.2
FRUIT		100.0	98.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2
MEAT AND OFFALS		100.0	103.5	105.6	108.1	107.4	107.4	106.3	106.3	106.3	106.3
Eggs		100.0	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6
FISH AND SEAFOOD		100.0	102.8	103.1	103.1	102.8	102.8	102.8	102.8	102.8	102.8
MILK		100.0	98.5	100.7	102.2	100.7	100.7	100.7	101.6	101.6	101.6
OILS AND FATS		100.0	109.9	107.8	101.3	100.7	104.2	103.2	101.3	101.1	101.1
VEGETABLE OILS AND FATS		100.0	100.0	97.7	100.0	101.1	104.3	104.3	101.1	101.1	101.1
ANIMAL OILS AND FATS		100.0	109.9	107.8	101.3	100.7	104.2	103.2	101.3	101.1	101.1
ALCOHOLIC BEVERAGES		100.0	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1

APPENDIX K (Contd.)

Appendix K-13 - Indices of Per Capita Food Supply and Annual Rates of Growth - Other Developments in Market Economy											
Cereals & Cereals		Grand Total		6/46-67		69-71		72-74		1971	
GRAND TOTAL	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
VEGETABLE PRODUCTS	1.00	1.00	1.02	1.07	1.09	1.09	1.09	1.04	1.04	1.03	1.02
ANIMAL PRODUCTS	1.00	1.00	1.02	1.05	1.04	1.06	1.06	1.02	1.02	1.02	1.02
GRAND TOTAL EXCL. ALCOHOL	1.00	1.00	1.02	1.07	1.02	1.02	1.02	1.02	1.02	1.02	1.02
CEREALS	1.00	1.00	1.02	1.07	1.02	1.02	1.02	1.02	1.02	1.02	1.02
ROOTS AND TUBERS	1.00	1.00	1.02	1.07	1.02	1.02	1.02	1.02	1.02	1.02	1.02
SUBSTRS AND HONEY	1.00	1.00	1.02	1.07	1.02	1.02	1.02	1.02	1.02	1.02	1.02
PULSES	1.00	1.00	1.02	1.07	1.02	1.02	1.02	1.02	1.02	1.02	1.02
HUHS AND OIL SEEDS	1.00	1.00	1.02	1.07	1.02	1.02	1.02	1.02	1.02	1.02	1.02
VEGETABLE OILS AND FATS	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
ANIMAL OILS AND FATS	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
ALCOHOLIC BEVERAGES	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
FRUIT AND OFFALS	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
FISH AND SEAFOOD	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
MILK	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
OILS AND FATS	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
VEGETABLE OILS AND FATS	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
ANIMAL OILS AND FATS	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
ALCOHOLIC BEVERAGES	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
PROTEIN (CD)		6/46-67		69-71		72-74		1971		1973	
GRAND TOTAL	1.00	1.00	1.01	1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02
VEGETABLE PRODUCTS	1.00	1.00	1.03	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
ANIMAL PRODUCTS	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
GRAND TOTAL EXCL. ALCOHOL	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
CEREALS	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
ROOTS AND TUBERS	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
SUBSTRS AND HONEY	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
PULSES	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
HUHS AND OIL SEEDS	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
VEGETABLE OILS AND FATS	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
FRUIT	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
MILK	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
OILS AND FATS	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
VEGETABLE OILS AND FATS	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
ANIMAL OILS AND FATS	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
ALCOHOLIC BEVERAGES	1.00	1.00	1.05	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02
FAT (CD)		6/46-67		69-71		72-74		1971		1973	
GRAND TOTAL	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
VEGETABLE PRODUCTS	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ANIMAL PRODUCTS	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
GRAND TOTAL EXCL. ALCOHOL	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
CEREALS	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ROOTS AND TUBERS	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
SUBSTRS AND HONEY	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
PULSES	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
HUHS AND OIL SEEDS	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
VEGETABLE OILS AND FATS	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ANIMAL OILS AND FATS	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ALCOHOLIC BEVERAGES	1.00	1.00	1.05	1.14	1.07	1.07	1.07	1.05	1.05	1.05	1.05
Milk		6/46-67		69-71		72-74		1971		1973	
GRAND TOTAL	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
VEGETABLE PRODUCTS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ANIMAL PRODUCTS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
GRAND TOTAL EXCL. ALCOHOL	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
CEREALS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ROOTS AND TUBERS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
SUBSTRS AND HONEY	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
PULSES	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
HUHS AND OIL SEEDS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
VEGETABLE OILS AND FATS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ANIMAL OILS AND FATS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ALCOHOLIC BEVERAGES	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
Fruit		6/46-67		69-71		72-74		1971		1973	
GRAND TOTAL	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
VEGETABLE PRODUCTS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ANIMAL PRODUCTS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
GRAND TOTAL EXCL. ALCOHOL	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
CEREALS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ROOTS AND TUBERS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
SUBSTRS AND HONEY	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
PULSES	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
HUHS AND OIL SEEDS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
VEGETABLE OILS AND FATS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ANIMAL OILS AND FATS	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05
ALCOHOLIC BEVERAGES	1.00	1.00	1.03	1.09	1.07	1.07	1.07	1.05	1.05	1.05	1.05

APPENDIX K (Contd.)

Appendix K-14 - Indices of Per Capita Food Supply and Annual Rates of Growth - Actual Controllably Planned Economies													
CATEGORIES (CONT'D.)		GRAND TOTAL		1971		1972		1973		1974		1975	
VEGETABLE PRODUCTS	61-63	64-66	67-71	72-74	1971	1972	1973	1974	1975	70/62	71/70	73/62	
ANIMAL PRODUCTS	100.0	105.2	114.3	116.5	117.6	113.7	113.7	116.5	113.7	1.01	1.01	1.02	
GRAND TOTAL EXCL. ALCOHOL	100.0	104.4	108.3	117.9	116.9	114.3	119.1	120.3	116.3	1.05	1.05	1.05	
DESSERTS	100.0	107.7	113.4	116.9	116.9	113.6	117.7	119.1	116.9	1.08	1.08	1.07	
ROOTS AND TUBERS	100.0	103.9	117.7	117.7	117.7	114.5	114.5	118.9	118.7	1.01	1.01	1.03	
SUGARS AND HONEY	100.0	105.5	114.6	121.5	121.5	118.7	117.7	117.7	118.7	1.10	1.10	1.09	
PULSES	100.0	102.3	112.6	115.4	115.4	116.5	116.5	116.5	116.5	1.05	1.05	1.05	
NUTS AND OIL SEEDS	100.0	106.0	116.1	126.7	119.4	122.3	128.3	128.3	129.6	1.25	1.25	1.24	
VEGETABLES	100.0	102.9	108.5	99.4	98.5	106.9	106.9	106.9	106.9	1.18	1.18	1.18	
FRUIT	100.0	100.7	99.3	115.5	98.5	99.7	99.7	99.7	112.0	-0.03	1.40	1.11	
MEAT AND OFFALS	100.0	103.1	106.7	102.1	100.9	101.7	101.7	101.7	103.5	0.45	0.45	0.45	
Eggs	100.0	105.9	112.5	112.5	112.5	112.7	112.7	113.0	113.0	1.12	1.12	1.11	
FISH AND SEAFOOD	100.0	103.2	114.5	122.6	122.6	127.4	127.4	127.4	127.4	1.24	1.24	1.24	
Milk	100.0	100.7	94.3	98.4	96.6	96.6	96.6	96.6	96.6	-0.77	-1.32	-0.99	
Oils and Fats	100.0	108.1	108.9	116.8	116.8	112.4	118.4	118.4	118.4	1.06	1.06	1.05	
VEGETABLE OILS AND FATS	100.0	112.5	111.9	119.4	115.3	113.2	123.3	121.4	121.4	1.37	1.37	1.36	
ANIMAL OILS AND FATS	100.0	108.2	108.2	108.2	108.2	108.2	108.2	108.2	108.2	0.47	0.47	0.47	
ALCOHOLIC BEVERAGES	100.0	105.7	128.8	168.4	168.4	168.4	167.4	167.4	171.3	3.22	6.91	4.74	
PROTEIN (C2)	61-63	64-66	67-71	72-74	1971	1972	1973	1974	1975	70/62	71/70	73/62	
GRAND TOTAL VEGETABLE PRODUCTS	100.0	108.7	112.4	116.7	114.9	118.3	119.4	119.4	119.4	1.37	1.37	1.36	
ANIMAL PRODUCTS	100.0	95.0	105.7	116.9	115.8	113.6	117.9	119.3	119.3	1.43	1.43	1.43	
GRAND TOTAL EXCL. ALCOHOL	100.0	108.7	113.2	112.5	112.5	114.5	118.3	119.4	119.4	1.38	1.38	1.38	
CEREALS	100.0	101.5	105.7	113.2	112.5	116.7	114.5	119.4	119.4	1.37	1.37	1.36	
POOTS AND TUBERS	100.0	102.4	116.1	115.2	115.2	121.2	121.2	122.9	122.9	1.23	1.23	1.23	
SUGARS AND HONEY	100.0	102.4	113.3	121.3	121.3	124.7	124.7	123.7	123.7	1.26	1.26	1.25	
PULSES	100.0	105.5	115.9	126.4	126.4	118.1	121.5	127.9	129.3	1.86	1.86	1.85	
NUTS AND OIL SEEDS	100.0	102.5	97.6	92.6	92.6	98.6	98.6	95.4	95.4	-0.04	-0.04	-0.04	
VEGETABLES	100.0	105.3	109.3	112.2	112.2	116.7	113.4	113.4	113.4	1.12	1.12	1.11	
FRUIT	100.0	101.7	102.8	107.7	107.7	103.3	103.3	103.3	103.3	0.94	0.94	0.95	
MEAT AND OFFALS	100.0	104.1	102.6	102.6	102.6	102.6	102.6	102.6	102.6	0.51	0.51	0.52	
Eggs	100.0	105.6	113.2	113.2	113.2	112.1	111.1	113.4	113.4	1.55	1.55	1.55	
FISH AND SEAFOOD	100.0	103.1	149.9	146.5	146.5	150.8	150.8	154.4	154.4	4.75	4.75	4.75	
Milk	100.0	98.9	98.1	97.7	97.7	97.7	97.7	97.7	97.7	-0.24	-0.24	-0.24	
Oils and Fats	100.0	101.2	122.3	147.2	147.2	149.3	150.2	152.0	152.0	2.35	2.35	2.36	
VEGETABLE OILS AND FATS	100.0	96.9	96.9	297.7	297.7	297.7	297.7	297.7	297.7	0.0	0.0	0.0	
ANIMAL OILS AND FATS	100.0	90.1	122.3	136.5	136.5	149.3	149.3	152.0	152.0	43.95	43.95	43.95	
ALCOHOLIC BEVERAGES	100.0	116.2	133.4	141.4	141.4	140.0	150.6	155.7	155.7	3.86	3.86	3.86	
FAT (C2)	61-63	64-66	67-71	72-74	1971	1972	1973	1974	1975	70/62	71/70	73/62	
GRAND TOTAL VEGETABLE PRODUCTS	100.0	105.6	106.4	108.2	107.6	107.6	110.1	110.1	110.1	0.78	0.78	0.78	
ANIMAL PRODUCTS	100.0	99.8	111.0	114.4	114.4	111.5	117.5	117.5	117.5	1.31	1.31	1.31	
GRAND TOTAL EXCL. ALCOHOL	100.0	102.6	102.6	103.1	103.1	104.3	105.2	105.2	105.2	0.43	0.43	0.43	
CEREALS	100.0	102.6	104.4	109.5	109.5	108.2	107.6	110.1	110.1	0.32	0.32	0.32	
POOTS AND TUBERS	100.0	102.6	114.2	114.2	114.2	121.4	120.5	122.6	122.6	1.38	1.38	1.38	
SUGARS AND HONEY	100.0	109.9	117.3	118.9	118.9	117.3	117.3	117.3	117.3	1.29	1.29	1.29	
PULSES	100.0	109.5	109.5	109.5	109.5	108.5	108.5	108.5	108.5	0.77	0.77	0.77	
HUITS AND OIL SEEDS	100.0	104.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.14	0.14	0.14	
VEGETABLES	100.0	103.3	103.3	103.3	103.3	103.5	103.5	103.5	103.5	0.17	0.17	0.17	
FRUIT	100.0	100.0	100.0	100.0	100.0	101.1	101.1	101.1	101.1	0.26	0.26	0.26	
MEAT AND OFFALS	100.0	105.1	112.1	112.1	112.1	114.9	114.9	114.9	114.9	1.55	1.55	1.55	
ECCS	100.0	100.0	141.3	141.3	136.4	140.2	139.1	136.4	136.4	2.71	2.71	2.71	
FISH AND SEAFOOD	100.0	96.8	92.3	90.1	90.1	90.8	90.8	90.8	90.8	-0.94	-0.94	-0.94	
Milk	100.0	119.0	109.2	116.4	116.4	112.3	113.3	118.5	118.5	1.10	1.10	1.10	
Oils and Fats	100.0	113.0	112.2	119.3	115.9	115.9	113.9	122.7	122.7	2.39	2.39	2.39	
VEGETABLE OILS AND FATS	100.0	101.6	101.6	101.6	101.6	101.5	101.5	101.5	101.5	0.12	0.12	0.12	
ANIMAL OILS AND FATS	100.0	101.6	101.6	101.6	101.6	101.5	101.5	101.5	101.5	0.12	0.12	0.12	
ALCOHOLIC BEVERAGES	100.0	101.6	101.6	101.6	101.6	101.5	101.5	101.5	101.5	0.12	0.12	0.12	

APPENDIX K (Contd.)

Appendix K, 15 - Indices of Per Capita Food Supply and Annual Rates of Growth - All Developing Countries											
CHLORIDES (KCL)		61-63		64-56		67-71		72-74		1971	
GRAND TOTAL		100.0		103.2		107.3		108.4		107.4	
VEGETABLE PRODUCTS		100.0		101.1		107.5		108.7		109.6	
ANIMAL PRODUCTS		100.0		101.8		105.6		106.8		106.8	
GRAND TOTAL EXCL ALCOHOL		100.0		103.0		106.0		107.2		106.5	
CEREALS		100.0		101.8		107.4		108.6		106.5	
ROOTS AND TUBERS		100.0		105.0		107.5		108.5		107.2	
SUGARS AND HONEY		100.0		103.8		116.2		118.8		119.3	
PULSES		100.0		94.8		93.6		99.0		92.3	
NUTS AND OIL SEEDS		100.0		99.3		93.5		96.6		92.3	
VEGETABLES		100.0		104.2		108.2		108.2		107.1	
FRUIT		100.0		105.2		105.4		105.4		109.0	
MEAT AND OFFALS		100.0		105.0		105.0		105.0		104.2	
EGGS		100.0		104.2		105.8		105.8		104.1	
FISH AND SEAFOOD		100.0		105.1		109.5		112.7		112.0	
MILK		100.0		104.0		105.6		105.6		105.1	
OILS AND FATS		100.0		104.2		110.0		113.5		112.3	
VEGETABLE OILS AND FATS		100.0		105.2		111.8		114.5		113.5	
ANIMAL OILS AND FATS		100.0		105.2		107.0		107.0		112.9	
ALCOHOLIC BEVERAGES		100.0		103.3		102.9		103.9		104.8	
PROTEIN (D)											
GRAND TOTAL		61-63		64-66		69-71		72-74		1971	
VEGETABLE PRODUCTS		100.0		102.8		106.2		107.2		107.3	
ANIMAL PRODUCTS		100.0		102.3		105.0		105.1		104.5	
GRAND TOTAL EXCL ALCOHOL		100.0		104.3		110.1		110.7		110.1	
CEREALS		100.0		102.2		106.0		107.5		106.6	
ROOTS AND TUBERS		100.0		103.3		108.1		109.6		108.1	
SUGARS AND HONEY		100.0		105.2		107.6		107.6		106.3	
PULSES		100.0		102.9		103.8		103.5		103.0	
NUTS AND OIL SEEDS		100.0		103.9		106.9		107.5		106.5	
VEGETABLES		100.0		104.6		107.1		108.2		107.3	
FRUIT		100.0		104.2		107.1		108.1		107.3	
MEAT AND OFFALS		100.0		105.6		109.2		110.6		109.1	
EGGS		100.0		105.6		113.5		113.5		112.7	
FISH AND SEAFOOD		100.0		106.9		121.6		121.6		119.7	
MILK		100.0		104.5		104.5		104.5		104.0	
OILS AND FATS		100.0		105.2		113.7		114.3		112.1	
VEGETABLE OILS AND FATS		100.0		105.2		113.7		114.3		112.5	
ANIMAL OILS AND FATS		100.0		105.2		112.9		113.7		112.1	
ALCOHOLIC BEVERAGES		100.0		105.1		116.7		117.0		116.0	
FAT (E)											
GRAND TOTAL		61-63		64-66		69-71		72-74		1971	
VEGETABLE PRODUCTS		100.0		102.2		105.3		107.7		107.3	
ANIMAL PRODUCTS		100.0		100.8		104.1		106.2		106.7	
GRAND TOTAL EXCL ALCOHOL		100.0		102.2		105.3		107.7		106.7	
CEREALS		100.0		103.1		106.3		105.3		104.7	
ROOTS AND TUBERS		100.0		105.6		105.6		105.6		104.9	
SUGARS AND HONEY		100.0		105.9		106.9		107.3		106.5	
PULSES		100.0		104.5		104.5		105.4		105.3	
NUTS AND OIL SEEDS		100.0		105.2		106.1		107.5		106.8	
VEGETABLES		100.0		107.7		110.1		110.1		109.6	
FRUIT		100.0		105.2		107.1		108.2		107.7	
EGGS		100.0		105.6		116.4		119.9		118.6	
FISH AND SEAFOOD		100.0		110.9		115.7		118.7		117.1	
MILK		100.0		109.2		113.7		114.7		113.4	
OILS AND FATS		100.0		104.9		104.9		105.0		104.9	
VEGETABLE OILS AND FATS		100.0		105.3		111.6		113.4		112.8	
ANIMAL OILS AND FATS		100.0		106.0		106.0		106.0		105.9	
ALCOHOLIC BEVERAGES		100.0		102.4		107.5		108.1		107.5	
FAT (E)											
GRAND TOTAL		61-63		64-66		69-71		72-74		1971	
VEGETABLE PRODUCTS		100.0		103.1		107.5		108.4		107.4	
ANIMAL PRODUCTS											

APPENDIX K (Contd.)

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Appendix K.16 - Indices of Per Caput Food Supply and Annual Rates of Growth - World

CALORIES (KCAL)	61-63	64-66	69-71	72-74	1971	1972	1973	1974	70/62	73/70	73/62
GRAND TOTAL	100.0	101.9	105.1	105.6	106.2	105.1	105.3	106.4	0.52	0.16	0.49
VEGETABLE PRODUCTS	100.0	102.1	104.9	105.3	106.0	104.9	105.3	106.3	0.59	0.20	0.45
ANIMAL PRODUCTS	100.0	101.0	106.2	106.1	106.9	106.2	105.3	106.8	0.75	-0.02	0.54
GRAND TOTAL EXCL ALCOHOL	100.0	101.8	104.5	104.9	105.6	104.3	104.6	105.7	0.53	0.13	0.44
CEREALS	100.0	101.6	103.4	104.6	104.6	103.6	103.3	105.0	0.42	0.18	0.35
ROOTS AND TUBERS	100.0	102.0	100.9	97.1	101.1	95.8	97.6	97.8	0.11	-1.27	-0.27
SUGARS AND HONEY	100.0	103.8	112.4	115.3	114.1	113.9	115.5	116.6	1.47	0.87	1.31
PULSES	100.0	96.0	95.3	91.9	95.6	94.1	92.7	89.4	-0.61	-1.29	-0.77
NUTS AND OIL SEEDS	100.0	106.5	95.1	97.5	99.2	97.9	97.6	97.6	-0.11	-0.52	-0.23
VEGETABLES	100.0	103.9	107.5	108.9	108.0	106.6	109.9	110.3	0.91	0.43	0.78
FRUIT	100.0	104.4	109.6	109.7	109.8	108.4	111.0	109.7	1.15	0.04	0.85
MEAT AND OFFALS	100.0	101.7	106.5	109.6	110.3	110.1	107.6	111.0	1.03	0.71	0.93
Eggs	100.0	102.2	113.6	114.6	115.6	115.5	113.8	114.5	1.34	0.47	1.23
FISH AND SEAFOOD	100.0	110.8	123.2	130.7	127.8	128.3	121.2	132.4	2.64	1.33	2.46
MILK	100.0	98.5	102.0	100.7	101.8	100.7	100.3	101.1	0.34	-0.66	0.07
OILS AND FATS	100.0	105.3	108.1	110.7	109.3	105.9	111.3	110.8	0.98	0.73	0.93
VEGETABLE OILS AND FATS	100.0	105.9	114.9	119.6	116.6	118.2	120.6	120.1	1.65	1.52	1.64
ANIMAL OILS AND FATS	100.0	99.0	98.9	96.9	96.9	97.3	96.3	96.3	-0.13	-0.59	-0.29
ALCOHOLIC BEVERAGES	100.0	105.9	112.8	119.1	115.0	112.3	126.7	121.4	1.62	1.54	1.60
PROTEIN (G)	61-63	64-66	69-71	72-74	1971	1972	1973	1974	70/62	73/70	73/62
GRAND TOTAL	100.0	101.7	104.6	104.8	105.3	104.6	104.3	105.4	0.56	0.06	0.43
VEGETABLE PRODUCTS	100.0	101.0	101.6	101.6	102.6	101.5	101.2	102.0	0.32	-0.98	0.14
ANIMAL PRODUCTS	100.0	102.9	110.3	111.3	111.3	111.1	110.5	112.4	1.23	0.32	0.98
GRAND TOTAL EXCL ALCOHOL	100.0	101.7	104.6	105.4	105.3	104.6	104.6	105.0	0.57	0.13	0.45
CEREALS	100.0	101.5	102.6	103.0	103.5	102.8	102.4	103.9	0.32	0.14	0.27
ROOTS AND TUBERS	100.0	100.4	98.4	94.2	98.6	93.0	94.5	95.1	-0.26	-1.45	-0.54
SUGARS AND HONEY	100.0	109.5	106.4	99.3	103.0	94.9	97.1	103.9	0.78	-2.27	-0.06
PULSES	100.0	94.1	96.0	92.8	96.6	95.2	93.5	93.6	-0.51	-1.12	-0.59
NUTS AND OIL SEEDS	100.0	100.7	93.3	98.6	99.2	98.5	97.9	98.5	-0.03	-0.21	-0.13
VEGETABLES	100.0	103.9	106.5	107.7	107.1	105.7	108.6	108.8	0.79	0.39	0.48
FRUIT	100.0	105.2	111.3	113.2	112.3	111.7	114.5	113.5	1.35	0.56	1.14
MEAT AND OFFALS	100.0	102.6	110.6	111.6	111.1	111.1	109.3	112.6	1.23	0.22	0.55
Eggs	100.0	102.6	113.6	115.1	115.3	116.0	114.2	115.1	1.60	0.45	1.29
FISH AND SEAFOOD	100.0	111.7	122.9	128.7	126.5	126.9	128.7	126.1	2.52	1.78	2.32
MILK	100.0	99.1	103.9	102.3	107.3	102.8	102.2	102.9	0.47	-0.43	0.23
OILS AND FATS	100.0	99.4	101.6	109.6	102.0	99.5	103.9	101.0	0.06	-0.66	0.04
VEGETABLE OILS AND FATS	100.0	104.2	106.1	107.7	108.1	108.5	107.8	107.6	0.74	0.50	0.50
ANIMAL OILS AND FATS	100.0	98.7	99.6	98.2	100.1	96.9	98.8	99.1	-0.13	-0.25	-0.16
ALCOHOLIC BEVERAGES	100.0	108.6	123.1	132.2	126.0	128.3	133.4	134.7	2.63	2.41	2.57
FAT (G)	61-63	64-66	69-71	72-74	1971	1972	1973	1974	70/62	73/70	73/62
GRAND TOTAL	100.0	102.0	104.9	108.0	108.2	107.5	107.6	108.5	0.83	0.34	0.70
VEGETABLE PRODUCTS	100.0	104.0	108.9	111.6	110.1	111.6	111.8	112.0	1.07	0.81	1.00
ANIMAL PRODUCTS	100.0	100.6	105.4	105.3	106.2	105.5	104.4	106.1	0.66	-0.63	0.47
GRAND TOTAL EXCL ALCOHOL	100.0	102.0	106.9	108.0	108.2	107.8	107.6	108.5	0.83	0.34	0.70
CEREALS	100.0	101.8	103.4	102.6	104.9	102.3	101.3	104.1	0.42	-0.23	0.23
ROOTS AND TUBERS	100.0	103.5	103.0	99.6	103.9	97.6	100.3	101.0	0.37	-1.69	-0.62
SUGARS AND HONEY	100.0	107.2	94.4	87.7	88.2	87.3	89.7	86.2	-0.72	-2.42	-1.18
PULSES	100.0	91.0	88.7	83.7	89.3	88.4	83.9	78.7	-1.49	-1.91	-1.61
NUTS AND OIL SEEDS	100.0	101.1	100.4	98.4	100.1	99.1	98.1	97.9	0.05	-0.57	-0.15
VEGETABLES	100.0	104.1	107.7	109.2	108.5	107.3	109.9	110.4	0.93	0.46	0.80
FRUIT	100.0	105.4	111.9	113.7	112.1	111.9	115.0	114.3	1.41	0.56	1.18
MEAT AND OFFALS	100.0	101.6	100.2	109.2	110.3	109.7	107.2	110.6	0.99	0.29	0.86
Eggs	100.0	102.6	113.5	115.1	113.3	114.0	114.3	115.1	1.60	0.45	1.29
FISH AND SEAFOOD	100.0	109.2	124.8	132.7	126.0	131.7	133.7	135.7	2.81	2.31	2.68
MILK	100.0	98.6	103.5	102.0	102.2	101.7	101.7	102.6	0.44	-0.50	0.18
OILS AND FATS	100.0	103.3	108.1	110.7	109.3	109.3	111.4	110.8	0.98	0.80	0.93
VEGETABLE OILS AND FATS	100.0	106.0	114.1	119.7	116.7	118.4	120.5	120.2	1.66	1.62	1.65
ANIMAL OILS AND FATS	100.0	99.1	99.0	97.0	98.1	96.9	97.3	96.4	-0.12	-0.68	-0.28
ALCOHOLIC BEVERAGES	100.0	127.8	141.8	139.6	145.1	143.0	133.7	142.1	4.46	-0.52	3.68

APPENDIX L

Estimates and Projections of Urban and Rural Population
1960, 1975 and 2000

	Year	Population (million)			Percent Urban	Average Annual Growth Rate (%)		
		Total	Urban	Rural		Total	Urban	Rural
Developed Market Economies	1960	650	422	228	64.9	1.0	1.8	-0.7
	1975	757	551	206	72.8	0.8	1.3	-1.1
	2000	923	767	156	83.1			
North America	1960	199	139	60	69.8	1.2	1.8	-0.5
	1975	237	181	56	76.5	0.9	1.4	-1.3
	2000	296	256	40	86.4			
Western Europe	1960	327	205	122	62.8	0.7	1.5	-0.7
	1975	364	257	108	70.4	0.5	1.1	-1.3
	2000	414	335	78	81.0			
Oceania	1960	13	10	3	79.4	1.9	2.4	-0.4
	1975	17	14	2	85.5	1.5	1.8	-0.7
	2000	24	22	2	91.6			
Other Developed Market Economies	1960	112	68	44	60.6	0.9	2.5	-0.6
	1975	139	99	40	70.9	1.2	1.8	-0.5
	2000	188	153	35	81.3			
Eastern Europe & USSR	1960	313	151	161	48.4	1.0	2.4	-0.6
	1975	364	215	148	59.2	0.8	1.7	-1.2
	2000	441	330	111	74.8			
ALL DEVELOPED COUNTRIES	1960	963	573	389	59.5	1.0	2.0	-0.6
	1975	1121	766	355	68.4	0.8	1.4	-1.1
	2000	1364	1097	267	80.4			
Developing Market Economies	1960	1323	304	1019	23.0	2.6	4.4	1.9
	1975	1939	578	1361	29.8	2.5	4.0	1.7
	2000	3623	1546	2078	42.7			
Africa	1960	219	30	190	13.5	2.5	5.3	2.0
	1975	319	65	254	20.3	2.9	5.1	2.2
	2000	658	223	435	33.9			
Latin America	1960	216	105	111	48.5	2.8	4.3	1.0
	1975	324	196	128	60.4	2.6	3.5	0.8
	2000	620	464	156	74.8			
Near East	1960	130	35	95	27.2	2.7	5.0	1.7
	1975	195	74	121	37.8	2.7	4.1	1.5
	2000	380	202	178	53.2			
Far East	1960	755	134	621	17.7	2.5	4.1	2.1
	1975	1097	243	854	22.1	2.3	4.0	1.7
	2000	1957	653	1303	33.4			
Other Developing Market Economies	1960	3	0.4	3	12.3	2.5	6.2	1.8
	1975	5	1	4	21.0	2.4	5.0	1.4
	2000	8	3	5	39.2			

APPENDIX L (Contd.)

	Year	Population (million)			Percent	Average Annual Growth Rate (%)		
		Total	Urban	Rural		Urban	Total	Urban
Asian Centrally Planned Economies	1960	702	129	573	18.4	1.7	3.4	1.3
	1975	908	213	695	23.4	1.4	3.2	0.6
	2000	1270	462	808	36.4			
ALL DEVELOPING COUNTRIES	1960	2025	433	1592	21.4	2.3	4.1	1.7
	1975	2847	791	2057	27.8	2.2	3.8	1.4
	2000	4893	2008	2885	41.0			
WORLD	1960	2988	1006	1981	33.7	1.9	3.0	1.3
	1975	3968	1557	2411	39.2	1.8	2.8	1.1
	2000	6257	3104	3152	49.6			

APPENDIX M

Per Caput Calorie Supply and Percentage and Number of Individuals
Undernourished in Selected Countries
1969/71 and 1972/74

Country	Calorie Supply per caput			Population with Calorie Intake below 1.2 BMR			
	1969/71		1972/74	Percentage		Number (1000)	
	1969/71	1972/74	(1.2 BMR)	1969/71	1972/74	1969/71	1972/74
Afghanistan	1947	2000	1548	43	37	7301	6774
Argentina	3342	3281	1631	2	2	475	494
Bangladesh	1945	1949	1512	38	38	25723	27026
Bolivia	1808	1860	1545	52	45	2486	2315
Botswana	2116	2025	1517	33	36	204	237
Brazil	2507	2538	1545	14	13	13329	13478
Burma	2184	2131	1487	19	22	5272	6555
Cameroon	2407	2383	1526	14	16	817	990
Chad	2088	1765	1526	34	54	1238	2063
Chile	2802	2736	1554	11	15	1031	1484
Colombia	2152	2164	1487	29	28	6402	6806
Dominican Rep.	2023	2158	1517	38	33	1650	1581
Ecuador	2062	2087	1507	30	30	1809	1995
Egypt	2675	2632	1557	7	8	2333	2866
Ethiopia	2168	2051	1512	25	38	6462	10174
Ghana	2273	2302	1498	22	20	1898	1866
Guatemala	2015	1987	1493	38	38	2013	2197
Guinea	2071	1994	1517	38	41	1490	1725
Haiti	1964	2029	1523	43	38	1821	1678
Honduras	2178	2052	1517	32	38	817	1075
India	2034	1970	1486	26	30	141214	175162
Indonesia	1965	2033	1507	34	30	40619	38742
Iran	2162	2326	1508	23	15	6523	4647
Iraq	2300	2392	1528	17	14	1591	1447
Ivory Coast	2608	2626	1517	9	8	388	371
Kenya	2241	2137	1517	24	30	2699	3722
Korea Rep.	2707	2749	1531	4	4	1255	1332
Liberia	1943	1976	1517	42	37	640	603
Libya	2553	2698	1526	13	7	252	149
Madagascar	2463	2360	1517	14	17	970	1285
Malawi	2340	2414	1517	19	14	828	655
Mali	2056	1759	1526	38	49	1918	2656
Mauritania	1993	1867	1517	36	48	418	591
Mexico	2661	2693	1512	9	8	4528	4435
Morocco	2480	2593	1528	14	10	2118	1650
Mozambique	2019	1989	1536	34	36	2800	3173
Nepal	2041	2015	1486	27	29	3033	3499
Nicaragua	2417	2384	1523	17	18	335	391
Niger	1989	1857	1526	36	47	1446	2048
Pakistan	2148	2132	1512	24	26	14508	17223
Paraguay	2781	2723	1487	6	8	138	200
Peru	2312	2328	1526	23	23	3047	3326
Philippines	1945	1953	1517	35	35	13161	14550
Saudi Arabia	2361	2411	1534	14	12	1084	1014

APPENDIX M (Contd.)

Country	Calorie Supply per capit 1969/71	Critical limit 1972/74 (1.2 BMR)	Population with Calorie Intake below 1.2 BMR			
			Percentage		Number(1000)	
	1969/71	1972/74	1969/71	1972/74	1969/71	1972/74
Senegal	2229	2181	1526	25	25	981 1053
Sierra Leone.	2311	2254	1498	20	21	529 596
Somalia	1874	1916	1492	42	40	1171 1202
Sudan	2096	2067	1526	30	30	4709 5153
Swaziland	2072	2118	1536	35	33	143 147
Syria	2462	2525	1536	12	10	750 683
Tanzania	1964	1958	1498	35	35	4646 5076
Thailand	2295	2315	1511	18	18	6434 7095
Togo	2164	2167	1498	24	24	470 510
Tunisia	2213	2378	1514	24	16	1233 977
Turkey	2833	2830	1577	7	7	2466 2655
Venezuela	2405	2399	1536	7	7	739 806
Zaire	2022	1848	1504	34	44	7357 10244
Zambia	1980	2016	1517	35	34	1503 1600